D6.01.27

No.

IN THE

SUPREME COURT

OF THE

STATE OF CALIFORNIA.

CHARLES LUX ET AL.,

Appellants,

vs.

JAMES B. HAGGIN ET AL.,

Respondents.

TRANSCRIPT ON APPEAL.

Volume 4.

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Attorneys for Appellants.

LOUIS T. HAGGIN,
Attorney for Respondents.

Filed..... *1882.*

.....*Clerk,*

By.....*Deputy.*

DEFENDANTS' CASE.

INDEX.

		Page	Folio
Affidavit of O. P. Calloway		10	38
Testimony of—			
Anderson, S. H.	direct	44	174
	cross	47	187
Articles Incorporation Kern River Land and Canal Co		395	1579
Articles Incorporation Kern Valley Water Co		405	1619
Testimony of—			
Barker, Vining	direct	154	614
	cross	155	618
	re-direct	156	622
Barnes, T. W	recalled, direct	36	142
	cross	39	152
Calloway, O. P	affidavit of	10	38
Testimony of—			
Carr, W. B.	recalled, direct	414	1653
	cross	417	1666
	re-direct	418	1668
	re-cross	418	1669
Certificate Filing Articles Incorporation Kern River Land and Canal Co		397	1587
Certificate Incorporation Kern River Land and Canal Co		404	1615
Testimony of—			
Colton, F. H.	direct	22	85
	cross	32	124
	re-direct	36	140
	recalled, direct	40	157
	cross	41	160
Creasy, J. F.	direct	357	1427
	cross	358	1429
Cross, E. D.	direct	251	1003
	cross	253	1008
Crusoe, L	recalled, direct	51	201
	cross	57	227
Dixon, L. L.	direct	176	701
	cross	184	732
	re-direct	196	783
	re-cross	197	787
	recalled, direct	253	1010
	cross	257	1025
	re-direct	259	1033

		Page	Folio
Deed, W. H. Baxter to Kern River Land and Canal Co		400	1598
Deed, J. B. Haggin to Kern River Land and Canal Co		403	1609
Testimony of—			
Dumble, E. H	direct	15	58
	cross	18	70
	recalled, direct	259	1034
	cross	262	1046
	re-direct	264	1055
Exhibits (Defendants')—			
A		419	1675
B		414	1653
C		419	1675
D		419	1672
E and F		385	1539
H		418	1670
I		418	1671
J		419	1672
K		418	1670
L		65	257
		419	1673
M. N		419	1673
O		318	1268
		419	1673
P		345	1377
		419	1673
Q		419	1675
R		419	1673
S		404	1615
Exhibits (Plaintiffs')—			
39		355	1416
Testimony of—			
Fillebrown, T. R	recalled, direct	60	239
	cross	80	317
	re-direct	90	359
	re-cross	92	367
	re-direct	94	373
	recalled, direct	265	1056
	do do	364	1453
	do cross	367	1465
	do direct	410	1637
	do cross	410	1638
Gates, M. W	direct	41	163
	cross	42	170
Gibbes, Chas. D	recalled, direct	407	1626
	cross	409	1632
	re-direct	409	1635
Hays, Jacob	direct	355	1416

		Page	Folio
Testimony of—			
Hays, Jacob	cross	356	1421
	re-direct	356	1422
	re-cross	357	1425
Jackson, C. J.	direct	19	75
	recalled, direct	117	467
	cross	135	536
James, Walter	recalled, direct	218	868
	cross	241	963
	re-direct	250	998
	re-cross	251	1002
Kern River Land and Canal Co.—			
Articles of Incorporation		395	1579
Certificate Filing Articles Incorporation		397	1587
Certificate of Incorporation		404	1615
Kern Valley Water Company—			
Articles of Incorporation		405	1619
Testimony of—			
Keyes, J. C	recalled, direct	282	1124
	do do	315	1259
McClung, F. B.	direct	106	422
	do resumed	108	431
	cross	112	445
	re-direct	117	465
McCray, F. P.	recalled, direct	385	1537
	do do	411	1640
	cross	413	1649
McFarland, Wm	direct	1	3
	cross	13	51
	recalled	367	1466
	cross	374	1494
McLean, D. G.	direct	379	1513
	do continued	385	1539
	cross	388	1548
	re-direct	394	1572
	re-cross	395	1577
Macmurdo, W. R.	direct	266	1060
	do continued	283	1128
	cross	306	1222
	re-direct	340	1356
	cross	348	1391
	re-direct	352	1404
	re-cross	360	1437
Murray, J. P	direct	375	1496
	cross	379	1512
	recalled, direct	384	1535
	cross	385	1536
Neal, W. R.	direct	358	1431
	cross	359	1432

		Page	Folio
Testimony of—			
Noble, H	direct	48	189
	cross	50	199
Notice Water Claim—			
Calloway Canal		8	30
James Canal		234	935
Testimony of—			
Parrish, G. W	direct	95	378
	cross	97	386
	re-direct	108	430
Reading, H. A	direct	157	625
	cross	164	654
	re-direct	173	690
Sampson. J. A	recalled, direct	316	1262
	cross	316	1263
Schuyler, J. D.	recalled, direct	203	809
	cross	211	841
	re-direct	217	866
Steinman, Fred	direct	98	391
	cross	101	402
Thornton, Geo. F	direct	148	588
	cross	153	608
Wagoner, Daniel	direct	199	792
	cross	200	799
	re-direct	203	808

1 *In the Superior Court of the County of Kern, State of California.*

CHARLES LUX AND AL.

v.

JAMES B. HAGGIN AND AL.

2

Plaintiffs' Bill of Exceptions on Appeal, and also on Motion for a New Trial.

VOLUME III.

3

MONDAY, May 16, 1881.

WM. MCFARLAND,

A witness for the defendant, being duly sworn, testified:

(To Mr. FLOURNOY). I reside at Bakersfield, Kern Co. I have lived in Kern Co. since July, 1871. I am pretty generally acquainted with the Valley portion of the county. I know where Old River is. I first crossed Old River in the Fall or Winter of 1871. At the Noble crossing and at Stine's crossing. I crossed at both of those places in the Fall and Winter of 1871. By the Noble crossing I mean the Anderson crossing,

4 where the Anderson bridge is now. I think I first crossed at the Noble crossing in October, and later at Stine's crossing.

Q—How was the water at the Noble crossing when you crossed in October, 1871?

A—There was a great deal of water in it, but not as much as I have seen since. There was a good body of water at Stine's crossing that year, too. I had occasion to cross Old River occasionally in 1872. In the last part of 1872, I was registering voters for the County Seat election, a special election for the County Seat. I don't think I crossed Old River in the Spring
5 of 1872. I might have crossed it once or twice going to a party, or something like that. I had no business across it. I first remember having crossed it in 1872, in the month of July. I crossed it at several places in July, crossed it at the Noble and Anderson crossing, the Stine crossing, the Charlton crossing, and below the Charlton crossing. I don't know that it had any name. There was a good body of water in the river in July, 1872.

Q—What do you mean by a good body of water, was it bank full, or how?

A—No, it was not bank full; sometimes it would be
6 so full, it would be dangerous to try to cross it at certain points, and then we would go and find a better crossing. You could tell by looking at it whether you thought it would be swimming or not.

Q—Did you see it much in 1873?

A—Yes, sir. I was on the same business in 1873, in February. I saw it in January and a part of February. The election was held in February, 1873. In the Spring of 1873 there was plenty of water.

Q—You mean by that pretty high full?

A—Yes, sir.

Q—Do you recollect when the bridge was built at
7 Anderson's crossing?

A—Yes, sir. I don't recollect the month, I recollect the year. I have crossed that bridge in 1874. In that year, I have seen the water up until it touched the stringers of the bridge. I think that was in the Spring of the year 1874. There were times in 1875 and 1876 in Old River that there was not much water.

Q—How was it at other times?

A—When they cleaned the sand away from the front of the gate that was put in.

8 Q—You mean by that, that the sand had accumulated in front of the gate, what gate was that?

A—That was a gate that was put in, in 1873, at the head of the Stine Canal.

Q—Do you mean that the sand had accumulated at that head-gate, and that had affected the flow of the water?

A—Yes, sir; that was cleaned away occasionally. I think it had to be cleaned away most every year. I don't remember seeing it done every year. I saw them once or twice cleaning it away.

Q—What was the effect, when the sand was cleaned
9 away, upon the volume of water?

A—The water came down the same as before.

Q—Do you know anything about a new head-gate being put in?

A—Yes, sir; that was put in 1877, I think.

Q—Do you know anything about the Calloway Canal?

A—Yes, sir; I saw the notice of appropriation of water by the Calloway Canal.

Q—At what time, first.

Mr. Houghton—Of course, this all goes in subject to the same objection.

The Court—Certainly.

10 The Witness—The first time I saw the notice, I think, was some time along in May, 1875. It was posted on a tree at the north side of the river, above the railroad bridge. I should think it was 200 or 300 or 400 feet from there. I don't know exactly. I don't think I read the notice when I first saw it. I just glanced at it at that time. I saw the same notice at the same place afterwards—I think, sometime in June; the second time, between the 7th and 15th, probably, I could not say certain. It might have been later or it might have been earlier. I read the notice at the time. I only recollect two of the names signed to
11 that notice. There was Mr. Calloway and Mr. Burcham. There were quite a number of other names. I didn't know any of the parties, and I didn't remember them.

Q—Had you any reason, particularly, for reading it when you went there, the second time you speak of?

A—Yes, sir; Calloway wanted me to go over and take up some land on soldier warrants, and I went over there to see about it. I had seen Calloway before I went there and I read the notice.

12 Q—Have you any recollection of the substance of the contents of the notice?

A—A portion of it.

Q—What do you recollect about it?

A—My recollection of it now is, I have seen a copy of it since I heard it read in Court.

Q—I ask you what you recollect without having heard it read?

A—My recollection is, it was something over a hundred feet on the bottom.

Q—What else do you recollect—state anything else you remember about it?

13 A—It was to be a canal, 100 feet or more on the bottom, and its terminus was to be at Tulare Lake, and the amount of water, as near as I can remember, from what I read about it at that time, was 80,000 inches. I know now the number of inches, because I have heard the notice read since then; but I could not have sworn positively what it was.

Q—Speaking to the best of your recollection, without reference to having heard the notice read here in Court, state what you remember about it with reference to that?

A—Well, I would say about 80,000 inches is what I
14 remember. I don't know as I remember anything else. I remember that it was about something over a hundred feet at the bottom of the canal, and that it was to go in the direction of and into Tulare, and that it was about 80,000 inches of water that was to be taken in it. I don't think I remember any other circumstances about the notice. I heard the Calloway notice read here in court last Friday, partly by Mr. Flournoy and partly by Mr. Haggin.

Q—Did you recognize that as the same notice that you had seen posted?

A—Yes, sir; as near as I could recollect, that was
15 the same notice. I know it was the same. I don't know what became of the notice that I saw. It was written on paper and posted on the board. I have no idea what became of the copy that I saw. I suppose it was destroyed the same as any other paper that was posted up, by the elements. I have not heard of it since.

Mr. HOUGHTON—I understand you to say that you don't remember the names of any other parties who signed that.

A—No, sir; only those two. I don't remember how

16 many names were signed to it; I didn't count them. There were two columns of names on the paper at the bottom. I was acquainted with those two gentlemen: that is the reason I remember. I think I would recognize that notice, or a copy of it, if I were to see it. The most of it, I could tell whether it was a copy of the one I saw.

Q—I understand you to say you went there casually on May first. How are you able to fix that date?

A—I was assessing at that time from March to July. I started in and went over there. In March I started out around the foot-hills. I got back here. I was gone
17 about a month. I was around by Templore and Polonio pass and all through there. I didn't start to assess any further than that. I was gone about a month at that time. When I came back that was the first portion of the county I started at out of Bakersfield.

Q—What? Over there?

A—Yes, sir; so as to get Robb and those gentlemen right on the Calloway. I left for the mountains the first Monday in March and got back about the first Monday in April. I was over the river there in April and May of course.

Q—Where did you first start in on the other side of
18 the river to assess?

A—I started in right by Poso Creek and in around through there on that first trip. I was over there perhaps two weeks.

Q—Did you see this when over there on the first trip?

A—No, sir. I was not there at all the first trip. I went over again somewhere along the first of May. It might have been the middle of May.

Q—What were you doing? what did you do after you made the first trip over there of two weeks? Go right there again.

19 A—I used to ride up and back at the time I was Assessor. I would go out and assess a week or ten days, and then come and write up the assessment-book.

Q—When you went there, and saw this notice, it was at the same time you went over there in the district that Good is in.

A—The first time that I saw the notice, that was; yes, sir, in May.

Q—When you got the Good assessment?

A—Yes, sir, I think so; I am not positive. I think

it was the same time. I might have been over there on some other business—poll-tax or something else. I think that time I assessed Good and all other men that lived in them. I could not tell how long I was over there at that time; may be three or four days, may be a week. Sometimes I would come back—be back the next day, if it was near town. I would write up at night what I took down in the day, and then go back the next day. At that time I didn't read the notice; I might have glanced at it; I didn't remember anything in it. When I was there the second time, in June, I went with some party to read the notice at that time—
went for that purpose at that time to look at the notice, to look at a piece of land. I think we stayed over there, and around Calloway, where he was working, perhaps two hours. Mr. Wilkinson was along with me in the buggy; he got out. They were working near there. They were at work on the canal at that time, right near there. That was a little further down the river than that still. I don't remember now how long I was reading that notice. We might have stood there and talked quite a while about it. I read the whole of that notice at that time, from the beginning to the end.

Q—And all you remember of it was, that there was a
claim of 80,000 inches of water, as you remember now?

A—Yes, sir.

Q—And that it ran westerly, or that it ran towards Tulare Lake?

A—I don't remember the section. It ran towards Tulare Lake. I don't remember how it stated it.

Q—And all that you remember positively about it was that the canal was to be over a hundred feet wide on the bottom?

A—Something over a hundred feet.

Q—That is all you remember about it?

A—And those two names.

Q—How long ago was that? That was in 1875, was it?

A—Yes, sir; six years ago next month.

Q—Notwithstanding that, you can remember these three facts? How long was this notice?

A—There was four or five pages, I think, legal cap.

Q—Notwithstanding you can only now remember those three facts, you think if a notice was given to you three or four pages long now, that you could remember whether that was a copy or not?

24 A—I think I could remember the biggest portion of it.

Q—Can you swear that anything now produced, four or five pages long, would be a copy of the notice you read at that point?

A—I could, if I read it. I wouldn't swear to it without reading it.

Q—If a notice was shown to you, four pages long, in connection with the Calloway, would you swear whether it was or was not a copy of the notice you saw?

A—I would take the general facts, and I would naturally suppose it was the same one.

25 Q—You would suppose it was—you would not know as a fact that it was?

A—I could not swear to every word of it; no, sir.

Q—You would not undertake to swear that any notice shown to you, or the notice read the other day, was a perfect, full and complete copy of the one you read?

A—No, sir; I would say, to the best of my knowledge, that was the notice. That is all I could say.

Mr. FLOURNOY—You could speak as to the substance of it?

A—Yes, sir.

Mr. FLOURNOY—We now propose to show the notice

26 to the witness.

Mr. HOUGHTON—I object to it on the same ground on which objection has been made to the other notice, and, further, that they have not shown by him—he has testified he could not say whether it was a copy or not, and on the further ground that the witness has testified that, if shown to him, he could not testify whether it was a copy or not.

The objection is overruled. Plaintiffs except.

Mr. FLOURNOY—Mr. McFarland, will you read this notice of Calloway Canal carefully, and see if you recognize that as being substantially the notice that you

27 saw posted—a copy of the notice.

[Here the original record, Vol. I, of water rights of Kern County, pages 37, 38 and 39, containing the notice of appropriation by W. H. Baxter and others, is shown to the witness.]

A—As near as I can remember, I think that is the notice. I can state that that is substantially the same. I could not say it is word for word. I could not now, after reading it now.

Mr. FLOURNOY—We offer this now to identify the

28 record. We offer this as a record. The original of it was read. We now offer this simply in addition to the certificate on the original notice of the record itself.

Mr. HOUGHTON—I object to that. We waived their producing the original; but I object to its going in in this form under that waiver.

Mr. FLOURNOY—We offer the record.

Mr. HOUGHTON—We object to it on the ground that the original of this record has already been put in, and therefore they can't encumber the record by putting in a record of the copy in the Recorder's books.

29 Mr. FLOURNOY—We offer it in order to show a compliance with the law that this was put upon record. We propose to read it from the record as a portion of our evidence.

Mr. HOUGHTON—We object to that on the ground that they have introduced the original itself with the indorsement of record on it, and that they can't introduce the record itself, or certified copy of that record, unless they account for the loss of the original, and it appears affirmatively, by their putting it in evidence, that they have the original.

The objection is overruled. Plaintiffs except.

30 The record is then read in evidence, and is in the words and figures following, to-wit:

"NOTICE.

"We, the undersigned, claim the water flowing in "Kern River, Kern County, State of California, to the "extent of seventy-four thousand inches, measured un- "der a four-inch pressure, for irrigating, manufacturing, "commercial and mining purposes, for use along "the route of the ditch or canal hereinafter described, "said amount of water to be diverted from said Kern

31 "River at two certain points, to-wit:

"POINT FIRST—At a place on the right bank of said "river, about three hundred feet above the southern "Pacific Railroad bridge, on said river, at the mouth "of the slough known as the 'McCaffrey Slough,' in "Sec. 13, T. 29, S. R., 27 E. M. D. B. and M., which "said slough, and all the waters flowing therein, is "and are hereby claimed by the undersigned for the "purpose of conveying said seventy-four thousand inches "of water, and claim the privilege of deepening, enlarg-

"ing and otherwise improving the same for that pur-
"pose, in manner and form hereinafter set forth.

"POINT SECOND—At a point on the right bank of said
"Kern River, one hundred and fifty feet below said
"Southern Pacific Railroad Bridge, to be taken out in
"a ditch sixty feet wide and four feet deep, and about
"two hundred yards long, to convey water in and to the
"said first described slough as a part and parcel of the
"canal or ditch hereinafter described.

"Said water to be conveyed in a main ditch or canal
"in the said described "McCaffrey slough," said slough
"to be enlarged, deepened and widened for that pur-
"pose one hundred and twenty feet on the bottom and
"four feet deep, with a slope of one to one. Commenc-
"ing at the point where the waters appropriated unite in
"said slough about six hundred feet south and west of
"the said Southern Pacific Railroad Bridge, running
"thence in the bed of said slough, so enlarged and im-
"proved in a south and west course into Sec. 22, T. 29
"S. R., 27 E., M. D. B. and M., to a point on said
"slough near a bluff, at a willow tree on the right bank
"of said slough, marked with a blaze facing the slough,
"bench mark on said tree being 4 45-100 feet above
"surface of water in said slough, a distance of two miles
"and a half, more or less. Thence in a ditch or canal
"one hundred feet wide and four feet deep with a slope
"of one to one in a southwesterly course two miles and
"a half, thence in a northwesterly course to and into
"Tulare Lake thirty miles, more or less.

"And the undersigned also claim all the rights of con
"structing all necessary head-gates, sluice ways, and all
"and every privilege and use necessary, customary and
"lawful in the premises.

"Witness our hands this 4th day of May, A. D. 1875.

"W. H. BAXTER,	E. W. SCOTT,
"JUSTIN P. MOORE,	J. A. ROBINSON,
"CHAS. F. BROWN,	J. H. WILDES,
"S. N. PUTNAM,	O. P. CALLOWAY,
"ISAAC UPHAM,	W. WILKINSON,
"WM. HOLDEN,	I. L. COBLEIGH,
"JAMES T. ISH,	A. J. HAIGHT,
"L. L. BAKER,	JOHN BURCHAM."

Mr. HOUGHTON (Interrupting)—I object if the Court please, to the reading of the affidavit.

Mr. FLOURNOY—We don't offer it for any facts it contains.

Mr. HOUGHTON—I object to reading it on the ground that it is not a document entitled to record under any circumstances.

Mr. FLOURNOY—It is a part of the record. It comes upon it as a part of the record. Of course we could not offer it for the proof of any fact it contains. We do not claim it in that sense at all, but merely as a part of the record.

Mr. HOUGHTON—I object to it.

Mr. FLOURNOY—Not as proving anything except that it is upon the record; not as evidence of any fact it states.

The COURT—The record is admitted; the objection is overruled. Read the whole of it.

Mr. HOUGHTON—Our objection is that it is not a document entitled to record at all, and further, that it is irrelevant and immaterial.

The COURT—I understand. It may be irrelevant, but it is a part of the whole record introduced.

Mr. FLOURNOY—It is all one thing, a part of one paper.

Mr. Flournoy continues reading as follows:

"STATE OF CALIFORNIA, } ss.
"Kern County. }

"O. P. Calloway, being duly sworn, deposes, and "says that he is a white male citizen of the United "States and of the State of California; that he is a "resident of the City and County of San Francisco, "and of the age of 21 years; that on the 4th day of "March, A.D. 1875, he posted two notices, of which "the foregoing is a true and correct copy, at points "on the right bank of Kern River, Kern County, "aforesaid, in Section 13, T. 29 S., R. 27 E., M. D. B. "and M., and more particularly designated as follows, "namely: one at the mouth of the slough known as "the 'McCaffrey Slough,' three hundred feet above "the Southern Pacific Railroad Bridge, and one at a "point on said Kern River, one hundred and fifty feet "below said Southern Pacific Railroad Bridge, to "secure the water and water privilege claimed and "more particularly set forth in said notice; and fur- "ther saith not

"O. P. CALLOWAY.

"Subscribed and sworn before me this 4th day of "May, A.D. 1875.

"F. W. CRAIG, County Clerk. [L. S.]

40 "Recorded at request of O. P. Calloway, May 4th, "A.D. 1875, at 2 o'clock P.M.

"F. W. CRAIG, Recorder.

"The record of this is on pages 37, 38 and 39, in "Book of Water Rights of Kern County."

Q—Did you know Mr. Calloway personally?

A—Yes, sir; he is now dead.

Q—I understood you to say that you saw parties at work at the time you have already referred to. What time was that?

A—That was the time I was out to look at this piece
41 of land, at the time I read this notice. That was some time in June, 1875. The second time that I saw the notice they were working along in the McCaffrey Slough.

Q—Did you ever see them at work after that out there?

A—Yes, sir; along in the same year, the next month, probably. It might have been the same month. I think it was the last of June.

Q—What was going on then?

A—At that time they were working with scrapers,
42 in that bluff, up on the top of that bluff, near Robb's house.

Q—Did you see them any more that year?

A—Yes, sir; I was over several times during that year after that. I wouldn't be positive of the month. I might have been over there every month, or might have missed a month or so without being there; I think I was there. Business called me over there quite often. I was probably over there four or five or six times during the year 1875, after the 1st of July.

Q—Well, how were those times? Were they altogether, or scattered along through the year?

43 A—They were scattered along; I did not have business over there rugularly after I got through assessing; I was there occasionally.

Q—What do you mean by being out there?

A—I mean out along the north side—along the Calloway, passing through there somewhere.

Q—What did you observe, if anything, in reference to the Calloway at those different times you were out there?

A—Work was progressing there all the time. I could see every time I went there that they had gone ahead with that work; sometimes only two or three men were

44 working; sometimes there would be a larger force—five or six. There was a larger force there than there was in 1875. I was out there in 1876—along in the first of the year, probably February. The work was progressing faster than it was before, and there was a larger force on at work. After February, 1876, I was there more or less all through that year—probably several times.

Q—Did you have any particular business over there in 1876?

A- Yes, sir; I was in the Sheriff's office. Business called me over that way very often.

45 Q—Well, what did you observe whenever you were over there in 1876?

A—The work was continuing on the canal; men working every time I was over there; I never saw them when they were not working. I could not remember the months that I was over there in 1876. I was over there a number of times in 1877. I remember one month, in October, 1877, that I crossed there.

Q—Were you there at any time before October, 1877?

A—Yes, sir; I think I was there every season of the year 1877, but I could not state the months. I know I
46 was over there. I was in the Sheriff's office during that whole year. Whenever I was over there in 1877, the work progressed right along all the time.

Q—You spoke of October, 1877; what was there particular about that?

A—Well, there was some prisoners got loose out of the jail. Sheriff Williams and myself went over to San Luis Obispo, and coming back, we crossed over the swamp and came into the Calloway camp to get a drink of water. Their camp at that time was at about section 19. I don't think I was there any more after that in 1877. I was there in the first of 1878. I think it
47 was in February and March. I was there continuously for the first three months. I was working for the Company at that time, putting in head-gates and drops on Sec. 19, along the side of the Calloway Canal. I was there at work between two and three months, commencing about February, 1878. The work was progressing while I was there. They worked steadily on, and had a large force. I was right in sight of them all the time. They were a mile or so ahead of me where I was working, but you could see up there. After these three months I speak of, I went then and did some work on the Kern Island Ditch.

48 Q—When were you back next?

A—I didn't go back on the Calloway Canal. I might have been over there during that time on business; I might have gone over to have done some work, scraping, or something along over there, but I didn't go back any more till November, 1878. I went back there in November, 1878, to take up and complete the work permanently on the north side, along the line of the Calloway Canal. After that I was there daily, pretty nearly, for over two years, until the Calloway Canal was finished; I mean by daily, that my business was there.

49 Q—Whenever you went over there casually between those two or three months, and November, when you went permanently to work, and for all times you have been there subsequently, what have you observed with reference to the work?

A—Well, when I left there they were working on 19; when I got back the canal was four or five miles ahead of where I left it. I naturally supposed they had been continuously at work. There was a very large force on in November, when I went back—a larger force than there had ever been before. Probably over a hundred head of animals occupied it at that
50 time, They kept that up until the Calloway Canal was finished to Poso Creek; I was right in sight of the canal all the time.

Q—What was the appearance as to work on the Calloway Canal every time you were there since 1875?

A—Well, the work had progressed and went away ahead from where it was when I last saw it, every time that I went there.

Q—What was going on whenever you went there?

A—Teams were at work scraping and plowing—teams ahead plowing—and you could sometimes see
51 the surveying parties ahead surveying.

Cross-examination of

WM. MCFARLAND.

To Mr. HOUGHTON—I was over there in 1875, some time in June and July, and afterwards during the last four or five months of 1875; I am sure of that, because I was in the Sheriff's office at the time.

Q—Would you swear that you saw any work going on on that canal during the last four months of 1875?

52 A—Yes, sir.

Q—Were you over there during the last four or five months in 1876?

A—I was there the last four or five months; I don't know how many times; I don't know of any season of the year that I was not there.

Q—Did you see any work going on there during the last four or five months of 1876?

A—Yes, sir.

Q—Do you swear to that?

A—Yes, sir.

Q—You say, you were over there in February and
53 March, 1878, putting in head-gates?

A—Yes, sir. I went over there sometime along about the 1st of February and remained over there a few months. I don't know exactly the time. I left in April or May. I was putting in side gates. I put in the first side gate pretty near within a quarter of a mile of the house on Section 19. [Refers to map I.] In Tp. 29, R. 27.

Q—What other side gates did you put in at that time?

A—Well, sir, there were two or three hundred there, I think, put in at that time, all around, south and
54 north, and all around.

Q—Into the main canal?

A—No, sir, I am speaking of the side ditches now that run out of the main canal. I didn't work on any of the main gates. They were in, I think. They were mostly in when I got there. The main gates running out from these side ditches. I didn't put those in, I was putting them in the irrigating ditches, to throw water out on the land.

Q—Were the main side gates in at the large ditch at the time that you went there?

A—I think some of them were, yes, sir.

55 Q—You say that when you were there, you left there in April or May, and at that time the canal was three or four miles beyond where you were at work?

A—Yes, sir; I was working on Section 19, at the time when I left.

Q—Where was the canal when you went there in February. How far?

A—Well, it was probably a mile and a half or so, may be two miles.

Q—Was there any water in that canal when you went there?

A—No, sir. There was water in it in May, 1878. I

56 think the ditch broke. Well, that was just where we lived—by Mr. Jewett's place.

Q—Whereabouts on the slough were they at work when you went over there the second time and read that notice, above or below the bridge?

A—They were below the bridge probably three or four hundred yards. I don't think there was but four men employed there. I don't think that I ever saw more than six or seven men at work there at any time during 1875.

Q—When did you first know of their clearing sand away from the mouth of Old River, the head of Old
57 River, to let the water into it?

A—I think it was in 1874, I think that is the first time. The last time that I knew of their doing it, I think, was 1876.

Q—When were you last at the head of Old River?

A—I was there in 1876.

Q—Hav'nt been there since?

A—Yes, sir; I was there when they were building a weir in it, in 1877, across the head of the canal, above what is Old River.

Q—Have you been there since then?

A—I think I have crossed on that weir. Yes, sir. I
58 have been there since, I was down there with Mr. James one day, fixing the weir boards in there one day, I think that was in the last of 1878, or in 1879.

E. H. DUMBLE,

A witness for the defendant, being duly sworn, testified:

To Mr. HAGGIN—I live 3 miles north of Bakersfield. I first came to Kern County in 1864, and remained until
59 1869. I then went to Havilah, and returned here in 1871, and I have resided at Bakersfield since then.

Q—Do you know anything about the Calloway Canal?

A—Yes, sir; I was shown the notice which was posted appropriating water for that canal. Mr. Calloway showed me the notice. It was posted on a willow tree, rather on the southeast side of the tree, tacked on a board, and the board nailed to the tree. That tree was situated about 400 feet above the Railroad Bridge.

Q—How came Mr. Calloway to show you that notice?

60 A—He requested myself and other parties to go there and locate lands, pre-emption and homestead. I read the notice. I can only recollect two names of those which were signed to that notice, Mr. Burcham and Mr. Calloway. There were seven or eight other names, probably ten.

Q—Have you any recollection of any of the contents of that notice?

A—Yes, sir; I recollect that the canal was to be 120 feet in width, and 4 feet in depth; also something about the slope, but I could not understand that, and my recollection of the quantity of water to be diverted from
61 the river, is 75,000 inches; that was my recollection before I heard the notice read here in Court.

Q—Was there any circumstances that fixed that amount upon your mind in any way?

A—Yes, sir; Mr. Calloway and myself, and Dr. Brolton and Dr. McCallahan, had some conversation about the measurement of the water. It was to be under a 4-inch pressure. Mr. Calloway said it was miner's measure. We disagreed with him; that fixed it on my mind at the time. I am personally acquainted with both of those persons whose names I speak of; I didn't know any of the others. Mr. Calloway at that time resided
62 a part of the time at Mr. Robb's, and a part of the time in Bakersfield; he was backwards and forwards. Mr. Burcham resided down near Mr. Robb's; I can't tell you exactly; it was in the same neighborhood.

Q—Do you remember any other circumstance about the notice besides the width and the depth of the canal and the amount in inches of water?

A—I remember that it spoke of the ditch was to be carried in a northwesterly direction. I think it is my recollection of it, to Tulare Lake. I recollect that it was to be used for irrigation and commercial purposes, and, I think, mining purposes. too. I am not positive
63 about that; that is my impression. I remember that the notice names the McCaffrey Slough as a part of the ditch, to be a part of the canal.

Q—Was there any other circumstance that you remember about it?

A—Not that I can call to mind at present.

Q—Did you ever see any persons at work on this canal?

A—Yes, sir; I have seen them a great many times. The first I remember seeing them at work was in June, 1875. I think it was about the last of June. They

64 were at work then on the cut by the Butterbaugh house.

Q—Where was that cut situated as to the canal?

A—It is where the canal is taken from the McCaffray slough on to that point about where it leaves the McCaffray slough. It is a very deep cut; a very wide cut. I know that it was quite an undertaking when they were at work on it.

Q—Heavy work?

A—Yes; I think it was about eight or probably ten feet in depth. I saw them again in 1875, at different times. Every three or four weeks my business called me over on that side, and I have seen them at work. I
65 saw them at work on the canal during 1875, every three or four weeks; in 1876 I was in over there at different times about some work, repairing pumps for Haggin & Carr. I was not at work there continuously in 1876.

Q—What time in 1876 do you remember seeing the Calloway Canal?

A—I was there in January. I was over there every three or four weeks during the whole year, almost, through that country at work.

Q—You mean by that that there were no three or four weeks passed without your being there?

A—No, sir; I don't believe there was; I don't believe
66 there was a month passed without my being in that section.

Q—What did you observe whenever you were over there?

A—I observed a considerable force of men at work. Sometimes I stopped at the camp. Every time I was there they were at work; in the spring of 1877, I commenced work for Haggin & Carr, and have worked for them ever since. I commenced on that Calloway ditch, boring wells, manufacturing pipes and pumps, and setting horse powers. I began in the spring of 1877, and
67 I was at work through that year altogether, perhaps, to the amount of five months in all; in the spring of '77, I was there every few days at work. Sometimes I would be there for three or four weeks at a time, on the line of the canal. I was there in March, April and May, 1877, at work most all of the time.

Q—What did you observe about the canal at that time?

A—They were working on the canal. Most of my work was ahead of the canal, preparing wells for their camps.

Q—And could you see what they were doing?

68 A—Yes, sir; I went to their camps to get most of my supplies, and frequently went back for repairs, and I saw them pretty much all of the time then. There was quite a force of men on then, plowing and scraping. They were constructing the canal. After that, during 1877, I was there nearly all the time, off and on. I had a force of men there at work most of the time.

Q—Did you have occasion to see what was going on about the canal while you were there?

A—Yes, sir; they were working continuously, working on the ditch ahead. In 1878 it was the same. I
69 was there doing the same kind of work in 1878, pretty much all the time. In 1879 I was at work. I was not at work on the canal as much as I was in 1878. I was boring wells for tenants' houses. I saw the canal frequently, and passed it frequently, and dug, I think, two wells for different tenants. Whenever I saw the canal they were continuously at work, and had a large force on.

Q—Have you ever been there at any time when they were not at work?

A—Not that I recollect of.

70

Cross-examination of

E. H DUMBLE.

Mr. HOUGHTON. Q—You say you were on the Calloway Canal, near the head of it, in March, April and May, 1877? How much work had been done at that point at that time?

A—According to my recollection, they were down a mile and a half or two miles. They were probably down two miles north of Section 19. I don't know who was the contractor there at that time.
71 I could not tell you positively who had charge of the work. I don't know all of the parties that were at work. I think Haggin & Carr were doing it in 1877.

Q—You say you were then at the head of this slough, or near it, putting in pumps?

A—In 1877? No, sir; I didn't say anything of the kind.

Q—Where were you?

A—I put in pumps all through that country out there, and bored wells.

72 Q—Where were you at work in March, April and May, 1877, when you went over there?

A—I was a portion of that time ahead of the men that were at work on the ditch, and with the surveyors, a part of the time with the surveyors; we camped together a part of the time. In the spring of 1877, according to my recollection, they had constructed the canal about a mile and a half or two miles north of 19.

Q—Were you at the head-gate during the time you were over there in March, April and May, 1877?

A—I passed close by there, yes, sir; I can't tell what time they turned the water in that head-gate. I re-
73 member very distinctly there was water in the ditch in 1877; I think it discharged out from the ditch north of 19—waste water. I don't recollect how the water was taken in at that time; I don't know that I know how the water was taken in at that time. I say I was very close to the head-gate; I don't know that I was near enough to see it. In 1875 I was working a portion with Mr. Hunt, I think, I am not positive. My place of business was wherever work was being done.

Q—Did you have a shop anywhere?

A—They had a shop, yes, sir, on the west end of Bakersfield.

74 Q—Do you know the road that crosses the river, or did cross the river, there near the railroad bridge, where this notice was posted?

A—I know there was a ford there, yes, sir; that notice was about—my recollection was it was on the east of the ford; I think the ford was between the railroad bridge and where the notice was posted; that is my recollection. There is several fords over the river at different points.

C. J. JACKSON,

75 a witness for defendants, sworn, testified:

I reside in San Francisco; I have resided in Kern County. I first came to Kern County in the spring of 1866–7; I remained until the spring of 1867. I was here nearly a year; I then returned to San Francisco; I came back again in 1871, and again in 1872. I was in Kern County in 1874 and 1875; I was here in August, 1874; was here nearly all of that winter, until the next summer, off and on; spent my time here. I was down here until the middle of June, 1875. I knew

76 O. P. Calloway; I know something about the Calloway Canal; first knew it in the fall of 1874. Mr. Calloway came to me in the city. I saw the notice of appropriation in May, along about the 7th or 8th, 1875. I saw it posted above the railroad bridge, about three or four hundred feet from it; it was posted on a tree. I read it; I felt an interest in knowing what its contents were at the time. Calloway desired me to join him in the enterprise. I examined the notice.

Q—Have you any recollection of the contents of it?

A—Yes, sir. I have learned that Mr. Calloway was killed in Colorado.

77 Q—Please state what you remember of it as a matter of memory, from the time you saw it?

A—Well, it claimed to take water out at two points; this point where the notice was and also, from the McCaffrey slough, and it was to run in a north-westerly direction towards, or was to empty into Tulare Lake. It was claimed to be used for irrigation, agricultural purposes and mining purposes, and it claimed 75 or 80 thousand inches of water, and I noticed it was about one-fourth less than he had estimated to take, in talking with me about it, 75 or 80,000 inches is my recollection. It was to be over one hundred feet wide, and

78 under a 4 inch pressure. I remember some of the names that were on there. There was Governor William Holden, Mr. Robinson, Mr. Putnam, Mr. Baker, I think, and Calloway and Burcham. They told me where the notice was. I think the name was on it. I don't remember distinctly, Calloway's was on and Mr. Burcham's.

Q—How came you to remember those names?

A—Mr. Holden, Mr. Calloway and Putnam and all of those parties; we had talked about it in the city, and I naturally looked to see if they were on. I rather ex-

79 pected to find myself on there, to find my name on there. I knew quite a number of parties whose names were on there. But I cannot remember their names now. This was about the 7th or 8th of May, 1875. I saw parties at work on the Calloway Canal about the 1st of June of that year, and after that I saw them during December or January; December, 1875, or January, 1876. The teams were at work there scraping out. When I saw them the second time, they were still at work a little beyond where I first saw them, beyond where the water is taken out of the McCaffrey slough. I saw them after January, 1876; I think it was

80 about May, 1876. They were still at work, parties and teams. Along about the middle of September, 1876, I saw them again at work. They seemed to be at work there the same as ever. I saw them the following year, 1877, in the summer sometime, or spring. It might have been in May, or a month later. They were continuing to work. I was there in January 1877, just after New Years sometime—about the middle of the month. I was not there in February, 1877. They were at work there when I was there in January, 1877, the same as ever, on the canal. I went there afterwards to look at some desert lands; I could not ex-
81 actly tell the time; I was there several times during that summer, and they were always at work there on the canal. I was not there in the summer of 1877. I have been there since, but not so far down that I could see them at work. I was not there in 1876, from about June until September. Previous to that time I was there a number of times; I don't remember how many, in the spring. When I was there they were at work. That notice that I saw was on paper. I don't think I have ever seen it since.

Q—Do you think you could recognize the substance of a copy of it, if you were to see it?

82 Mr. HOUGHTON. Q—I understand you to say that you only saw that notice once?

A—I think that is all I ever saw it to read it, anyway; I was there at that time several minutes—long enough to read it; I think I read it all from beginning to end. I do not call to mind anything else in the notice except what I have stated. The notice was several pages long, I should think.

Q—Do you think you could remember, for six or seven years, that notice, if a copy of it was shown to you?

83 A—Yes, sir; I never saw it but once to read it. I have heard that notice read, and in this Court. I think it was on Friday. I did not hear it again this morning. I heard it read on Friday.

Mr. HOUGHTON—We make the same objections to showing this to the witness that we have to the others, and we make the further objection that they now propose to show to the witness a record which is a copy of a copy, and they have the original of the paper; and for that reason we object to their showing him this record, when they have the original of this record.

Objection overruled.

84 Plaintiffs except.

[The record is shown the witness.]

Mr. FLOURNOY. Q—Just read that over, and see if you recognize that as substantially a copy of the notice you saw posted.

A—Yes, sir; that is the substance of it; as I recollect, that is a copy of the notice that I saw posted.

[Notice is shown to witness.]

Q—I will ask you what pages of the book the notice you are looking at is on?

A—Commencing on page 37, 38 and 39; book of Water Rights of Kern County.

85

F. H. COLTON,

A witness for the defendant, being duly sworn testified:

To Mr. HAGGIN—I reside close to the town of Bakersfield, in Kern County. I have resided here since the 14th of August, 1875. I have been at work on the Kern Island Irrigating Canal ever since I have been here. For the first few months I had charge of the ditches coming into the town of Bakersfield and vici-
86 nity; and that fall, or after 1875, I took charge of the Kern Island Canal, under W. H. Souther, from the head of the canal to the south line of Township 30.

Mr. HOUGHTON—This, of course, comes in subject to the objections as to those canals.

The COURT—The same ruling; plaintiffs except.

The WITNESS—After Mr. Souther left I then took charge of the entire canal. Mr. Souther left sometime in 1878; I have forgotten the exact date. When I came here in August, 1875, there was water in that canal. It was being used here in the vicinity of town for irrigat-
87 ing town lands, and for supplying water to the different hotels and some residences, I believe, in town; also, for irrigating purposes. It has been used continuously ever since, for the same purposes. In August, 1875, the canal was getting water from what was known as the Souther head-gate. The Souther head-gate was situated somewhere near the southwest corner of Sec. 9, in Township 29, Range 28. It was getting the water from Kern River.

Q—Did you go to the Souther head-gate?

A—Yes, sir; that was on the river. The water was turned in from the river at that head-gate. After being

88 turned in at that head-gate it was carried in a ditch about half a mile. Then after that was turned into the south branch; what was known as the South Fork channel.

Q--Is that what is called Old South Fork here? [referring to map I.]

A—That is what is called Old South Fork. After the water was turned into Old South Fork it went down until it came down near the place kept by Capt. Stevens and into a ditch that was taken out of the South Fork channel. Captain Stevens' place was on Section 18, Township 29 South, Range 28 East, [referring to map I.]

89 From there it was taken in a channel that passed down to the Kern River Mills.

Mr. HAGGIN—I wish to refer to this map, [produces a map which is marked defendants' map K.]

Q—Are you familiar with the course of the Kern Island Canal and its branches?

A—I am, sir; I have been at work on it; I know them all.

Q—Do you know the country represented by this map K?

A—I do.

90 Q—Will you look at that map now, and see if it is a correct representation of the Kern Island Canal and its branches, and the South Fork, and a general representation of the river as far as you know?

A—I think it is, sir.

Q—That map seems to be in two parts, the top on one scale and the bottom on the other; do you know that one is a continuation of the other?

A—Yes, sir; that map is correct.

Q—The general course of the river and these branches and sloughs that are marked on there?

A—Yes, sir; I know them all.

91 Q—Will you point out on this map where this canal was getting water when you came here in August, 1875?

A—From this point here. [Pointing on Map K]. It is marked on that map as F.

Q—How did it get the water there?

A—Through this head-gate that is marked here. There is a head-gate at this particular point.

Q—Taking the water at "F," where did the water go?

A—Carried it down this canal to a point marked K, where it was then dropped into the South Fork—the old South Fork.

92 Q—Was there any water in the South Fork at that time?

A—There was no other water in the South Fork at that time; there was a dam immediately above this point K, which prevented any water from getting into the South Fork, or the water that was turned in running out. There was a dam between the point K and the river.

Q—Is there any mark on that map to fix where that was?

A—It was immediately below the point here marked J, between J and K.

93 Q—That you say prevented any water getting in from the river into the South Fork?

A—Yes, sir; or from South Fork going out into the river; After the water was dropped into the South Fork, it was then carried down the South Fork in a southwesterly direction, here to a point marked T. That is Captain Stevens' place.

Q—What was done there?

A—There was a small gate in the South Fork channel, or rather, there was a small gate going out. The ditch came out of the South Fork at that point marked T, and immediately, probably ten or fifteen yards after
94 leaving the South Fork channel, there was a small gate which carried part of the water back again into the South Fork channel.

Q—You say a ditch; what ditch was that?

A—This ditch coming down here, marked here as coming down by the Kern River Mills, marked T. S. W., and down to Y at the mills.

Q—Was that ditch constructed at the time you are speaking of, in August?

A—It was constructed and in use at that time. The water that was turned into the South Fork was all
95 taken out into that ditch there, with the exception of some water taken out at a point marked here "The Jewett Ditch."

Mr. McAllister. Q—Taken out at point T?

A—Some didn't run in there; that was taken out at point Q. That was used by Jewett on the cotton ranch. That is immediately above the point T.

Mr. Haggin. Q—Well, the water that was taken out at point T into this ditch, after running down to Y at the mill there; what was done with that water?

A—There was a part of it that was again taken out at the old gate, which is not marked here, in Sec. 19,

96 and thrown back into the South Fork and taken into the town of Bakersfield.

Q—Is not that the gate? [Referring to map K.]

A—No, sir. There was an old gate somewheres about there, not marked on this map. About half-way between T. and W. Maybe two-thirds of the way down from T. to W., where the water was turned into the South Fork channel and carried down the South channel to the head of the town ditch, and taken down the ditch into the town of Bakersfield, to supply the inhabitants of Bakersfield and the farmers in this vicinity. That was the only water supplied to the town
97 of Bakersfield. That ditch to the mill was constructed and in use when I came here.

Q—Now you speak of working on the ditch yourself. What was it you did, and when? What was the first thing you did in connection with this ditch or canal?

A—The first thing I did, was simply as general sanquero. I had charge of the water. That was my first work. The water was then being used.

Q—The water came down here to the mill, and I understand you to say it was emptied back into the South Fork?

A—Emptied back into the South Fork at that point.

98 Q—What came of it then?

A—That was reclaimed from the South Fork, at near the south line of Section 31, in Township 29; Range 28. By reclaimed I mean taken out of the South Fork into a ditch that runs in a south-westerly direction into it, near the range line, between 27 and 28, and thence down the range line that is, the greater part of it was there taken out. When that was needed to be used for irrigation purposes below, there was an old head-gate in the South Fork where the ditch came out, where we turned the same water through for irrigating purposes
99 below. The Kern River flour mill, is in the eastern part of the town of Bakersfield. It is worked by water power furnished through the Kern Island Canal. That is its sole power. I first knew that mill in 1875, when I first came here. It was running then, getting water from the Kern Island Canal. It takes quite a large head of water to run that mill. I take ordinarily to run in that canal for mill purposes, about 14,000 inches of water, under a four inch pressure, when I run only for mill purposes. I think we have added some machinery to that mill since I came here.

Q—Have they increased the amount of water, that is necessary to run it since you came?

100 A—Yes, sir; they have, to a certain extent.

Q—When was that done?

A—I ain't just sure. A year or so ago there was another run of burrs. I don't remember just what time. I didn't charge my memory with it. Prior to this change the mill required the same amount of water as it did when I first came here in 1875. That mill was running all the time from 1875, since I first came here, being supplied with water from the Kern Island Canal.

Q—When you came here in August, 1875, what was the size of the mill canal, running from point T, to the mill?

101 A—It has been the same size from that time to this. No enlargement.

Q—Running as much water in those days, as it does now?

A—Hardly; I should say that it did not need quite as much then as now.

Q—I am asking you about the quantity of water that was turned into it?

A—Well, during the year 1875, I could not say; during the year 1876, I don't think there was over half or two-thirds as much—probably two-thirds as much carried down as this year.

102 Q—You were in the employ then of the Kern Island Canal Company?

A—Yes, sir.

Q—And they claimed the right to take out that water?

A—They did, sir; they have always claimed it.

Q—Now, when were those other branches built lower down than the mill?

A—There was one branch immediately below the point K, here, to S, that was built in 1877. We commenced building it in the summer, or, I think, about January or February, somewhere along there in 1877; I don't remember just the date of the commencement; it was continued along in the summer until finished; I think it was finished sometime in June, although I won't be positive. That branch from F. to K. was in operation when I came here in 1875.

103

Q—Was this branch from K. to T. connected with that from F. to K.?

A—We connected at K. with the branch running from F. to K.

Q—In making that connection did you still continue to turn water into the South Fork at K.?

104 A—No, sir; there was an old gate at point K., which had been put in in the winter of 1875 and '6. We closed that gate, and then turned the water down this new cut from I. to S. There it dropped into what was known as the mill section of the canal.

Q—Making that connection through from K. to S., did you take any water out from South Fork?

A—We did not; we took the water from S. and ran it down to the mill canal, and took it from there, and also ran down to W., and there at point W. we took it out through a head-gate into the town ditch; we ceased using the South Fork as a regular channel; that is, that
105 part of it between K. and T.

Q—Did you do any other work at any time?

A—In the winter of 1878 and '9, we put in a new head-gate at point G, and changed the head of the canal to above an island which is immediately above the old point at F., carrying it above to the point marked C.

Q—Did you continue to take that water out at the point marked F.?

A—No, sir; that point F. was closed up; we took the water at C., carrying it from C. to G.; from G. to I.; and from I. to S.; and from S. downward to Y. We
106 simply changed the place of taking the water from the river.

Q—Did you have anything to do with the building of those branches lower down?

A—I had with this central branch of the Kern Island Canal, commencing in Sec. 6, Township 30 South, Range 28 East, and running thence down southward through that range to the Livermore ranch.

Q—You mean along the range line?

A—No, sir; this runs through Sec. 6, 7, 17 and 20, and so on, marked on this map, "branch of Kern
107 Island Canal."

Q—Was this which is marked "Kern Island Canal" running down the range line between 27 and 28, constructed when you came here?

A—Well, it was running water when I came here to Livermore ranch. There was some work done on it, and also some work done afterwards; I don't know just at what time; it was under Mr. Souther's supervision directly; I helped about putting in some head-gates—some weirs, rather—down on the lower part of that canal, in the winter of 1877 and '8.

Q—Does that Company—the Kern Island Irrigating

108 Canal Company—use the channel of the Old South Fork at any point below this point on Sec. 6, where the main canal branches?

A—On Sec. 31. They used it at no point below Sec. 31, Township 29, Range 28. They do not run water in it below that point.

Q—Are there no ditches running from Old South Fork to the Livermore ranch?

A—There was one constructed before I came here, leaving the South Fork on Sec. 4, Township 31, Range 28; running thence in a southwesterly direction to the Livermore ranch; it is not marked here on the map K.

109 Q—It is not on the map?

A—But a part of it.

Q—Has that been used since you came here?

A—That was used up to the time of the construction of this central branch canal in 1877 and '78.

Q—Does that central branch of canal empty into the south fork at any portion?

A—It does not, sir. It goes down and empties into this branch which came from Sec. 4 to the Livermore ranch. It emptied into that branch in Sec. 8, Township 31, Range 28; thus carrying the water to the Livermore

110 ranch, taking the place of the south fork channel from Sec. 31 to this point in Sec. 4; taking the place of the south fork channel so far as furnishing water to the Livermore ranch and the lands of Charles Kerr, and others in that vicinity.

Q—Is there any water running down south fork at all below this Sec. 31?

A—None at all, except by rainfall on the banks, and from its tributaries.

Q—You said that branch took the place of the south fork; what was the object of changing from that to the central cut and to the other branches?

111 A—There were two objects: First, to prevent wastage; secondly, to have better control of the water for purposes of irrigation. It would prevent wastage, because it takes less water, in our experience, to run in a perfect channel that is well made and kept clean and free from trees, logs and brush, than it does to run in an old channel that is full of impediments.

Q—In 1875, how was the water got into the canal from the river?

A—We had a dam across the river immediately below, at the point marked "E," on map K, crossing the river immediately below the point marked "F," at the outer

112 end of the head-gate. That was what was known as the Souther dam. It was made of brush and gravel, extending completely across the river, from one bank to the other. I could hardly say how high. It was first made; when I first saw it to pay any attention to it was the Winter of 1875, probably November or December. It was then, to all appearance, probably three feet above the bed of the river. It turned the water into the canal at the point "F."

Q—In December, 1875, what portion of the water of
113 the river was flowing by or coming down to that point?

A—I could not say. I know that we had all the water that we wanted in the Kern Island canal. That is all I cared about. I don't know anything about any other canals below, or anything else. I simply knew the Kern Island canal had all the water we wanted. That dam, at that time, was used by the Kern Island canal for the purpose of turning water into that canal. It was the property of the Kern Island canal. In 1876 that dam was still there. In the Spring of 1876 that dam broke at a point about two-thirds of the way across from this bank, and was a very great expense to repair it. We repaired it in June, July and August, 1876, commencing the latter
114 part of June.

Q—After repairing that, do you know what portion of the water was turned into the canal, and what portion went down the river?

A—I could not say at that time, because the river was high and there was an abundance of water. In the Fall of 1876, or the Winter of 1876 and '7, the Kern Island Canal took the larger share of the water, probably one-half of it. In 1877, it took the lion's share of it during the whole year. The water was scarce and we were taking the greater part of it. I don't remember that any time during 1877, it took all the water, but it did nearly
115 all of it, very little water went beyond it. There was a little went down which, I believe, was taken out in the South Fork, and occasionally we turned a little down for stock for parties down the river, for a few days at a time. The dam was intact in 1877. There was a break or two in the course of the season, but it was mended as rapidly as possible in each instance. There was not a great deal of water flowing in the South Fork in 1877; there was some.

Q—Did any water go down below the South Fork, except at those times you turned the water down the river

116 to the parties below who wanted it for stock?

A—That was about all, that is, there might be small quantities going down, but no large quantity.

Q—You say that in 1875, when you came here, there was a dam across the mouth of the South Fork, which not only prevented the water turned in by the Kern Island Canal from running back into the river, but also prevented any water getting into the South Fork?

A—Yes, sir; that dam continued there until the Winter of 1877 and '8, I think. I don't just remember, but I think about December, 1877, I think, was when it was removed by the South Fork Ditch Company.

117 Q—Did the Kern Island Canal have anything to do with that?

A—With the removal of it? Nothing more than the South Fork Ditch Company were going to take out the dam, clean out the dam in the original channel, and I made an arrangement with them whereby the Kern Island Canal Company paid them thirty-five or forty dollars to change the place slightly, so that it would not injure our levee.

Q—To change the place of what?

A—Where this dam came out. They only cut a small

118 part of this dam and made the channel anew, a little further to the westward in place of bringing it out and making it in the same point that the dam was thrown in.

Q—Was that cut made through to the river?

A—Yes, sir.

Q—Was the water turned into the South Fork then?

A—They made a head-gate in the Winter of 1877 and '78, and after that turned the water in through the new head-gate. The Kern Island Canal Co., had nothing to do with turning the water into South Fork. The South Fork Ditch Company did that. I know a part of them;

119 don't know all of them. There was Mr. Livermore, Mr. Jewett, Mr. Crocker, and, I believe, Mr. Owens, and several other parties. Mr. Beard, I believe, or Mr. Troy rather. I have been along the channel of South Fork, north of point T, and have seen the amount of water generally in that.

Q—How was the water in the river at the head of the Kern Island Canal in the latter part of 1877?

A—In the latter part of 1877, and the Winter of 1878, the water in the river was quite low. At that season of the year, some of it was going beyond the head of the

120 Kern Island Canal. We were not using so much water, and didn't take out so much at that time. During the year, 1878, there was considerable water in the river. At that place there was a great deal of water in the river, and in the Spring of 1878, the Souther head-gate was broken, and we did not have as good control of the water as we had before, before we got in the new head-gate and the new arrangement. In 1879, there was a part of the year that we had all of the water in the Kern Island Canal. In March, 1879, we had the larger part of it, and in the Fall of 1879, we had all of it—that is, we had it all
121 turned into the Kern Island Canal, but turned some out of the waste gate at the point G, for the use of those parties below.

Q—Take the average season that you have seen it, from 1875; the average years of 1875, '76, '77, '78 and '79. What proportion of the waters of the river would two ditches take?

A—I think that since I have been here and been acquainted with the river, that for fifteen months out of twenty-four the Kern Island Canal and the South Fork would carry all of the water of the river. In the spring time when the water was high in the river, it would go
122 past; there would be more than we could use.

Q—Did you have anything to do with the running of levels along the Kern and Buena Vista Lakes within the last month?

A—Yes, sir, with Fillebrown, Mr. Dixon and several others. I heard Mr. Fillebrown testify here a short time ago in this case about the running of the levels. I was with him on the occasion about which he was testifying. I assisted in making those measurements and running those levels.

Q—Did you see the different points that were designated to Mr. Fillebrown by Mr. Souther, Mr. Stock-
123 ton, Mr. Brown, Mr. Conner and others?

A—I saw those in the vicinity of the Livermore ranch, and the boat house and the lone tree. I saw the points where it was said that the water had come to. There was some other points, I believe, designated further to the west, but I was not present.

Q—Did you run levels around that way?

A—Yes, sir; we commenced in the first place with the ground level of the levee of 1875, of the Souther or Livermore ranch. That was the levee pointed out by Mr. Souther as being the one that he built in 1875, and

124 we ran from there down to the water's edge in Kern Lake; then we went back to the levee of 1876, where we could get a point that we had, and ran eastward to the lone tree. The lone tree was a little below the other levels. The boat house at the point indicated there (referring to map I) was the same, as near as we could get at it; the same as the levels that we had started from with the levee of 1875.

Cross-Examination of

F. H. COLTON.

125 By Mr. HOUGHTON. Q—You have been on those lakes often, have you not?

A—I have not. I never was there but twice in my life until I was there during the present month. I ran a level from the old levee of 1875 down to the water of Kern Lake. The difference in elevation of the two points is 16 feet and 27-hundredths; I didn't measure the distance between those points. To the best of my judgment, it was about two and three-quarters miles.

Q—What was the condition of the country for the first mile that you ran?

126 A—The greater part of the way it was tules; these old tules and some green tules that are now alive. There were tules all the way until we got to the bank of the lake; that is, until we got down to the margin of the lake. We struck the sand probably a mile and a half from the water's level. I don't remember just what the fall was there, but I think it was about twelve feet to that point down to the sand line, after we had passed all through the tules.

Q—Have you ever been on that land which is colored in yellow on map I, between the two lakes?

127 A—I never have.

Q—Were you on the line going from the boat house into the lake?

A—Yes, sir. In running that level there we found it very difficult to go down immediately to the lake, and in order to run the levels I started—the boat house would be here (referring to map I), out on the edge. I started out in here, and then came out and came in this way, so I could get down near to the water's level without having to go through the mud.

Q—Was not the land for the first mile after you left the boat-house pretty nearly level, going north?

128 A—No, sir, it was not. After you leave the boat-house, the first quarter of a mile, or such a matter, was more abrupt, and then after that it was a place down through a large lot of bull thistles. I didn't pay much attention to the ground, I was trying to get through the thistles just then, and we went around to the west of the patch of thistles in order to get aroud to the lake more conveniently, went around that way from the boat-house, so I did not take the levels from the boat-house directly north.

Q—You say that in March, 1879, the Kern Island Canal took nearly all the water?

129 A—Yes, sir; in April and May it didn't have so much. I believe, on the 12th of May we had some; from the 17th of March until the 12th of May we were without it. The head-gate put into the South Fork in the Winter of 1877 and '8, was built by Mr. Christianson.

Q—How did those people owning in what you call the South Fork Ditch Company, get their water between the time you went there in August, 1875, and the time they put in their head-gate in 1877?

A—The Kern Island Canal furnished it.

Q—It was run in at the head of the Kern Island Canal

130 and then dropped into the South Fork?

A—Run into the Souther head-gate and dropped into the South Fork below the dam I spoke of.

Q—When did you cease running water through the South Fork after it leaves Section 31, Township 29, Range 28?

A—I think it was in the year 1878. It was after finishing the central cut. Up to that time the water ran through the channel to Section 4. At Section 4 there was a dam across, and the water was there taken out and diverted to the Livermore ranch. There was no water running below Section 4.

131 Q—Wasn't there a time that the water ran from Section 4, and flooded the roads all about below there in 1877, down below Charley Kerr's as far as Section 16?

A—Well, it might have been there and I not know it, because I didn't have it in charge of that part of it. But I know that I cut this dam, which was a large and substantial one, on Section 4, myself afterwards to keep the rain water from running down into the ditch. I know I went there for that purpose and found a large and substantial dam there which I cut.

132 Q—When did you take that gate out on Section 31 and put a permanent dam there?

A—The old gate still remains, it never has been taken out. The water was run through there last in 1878. The South Fork channel below that cut, is now badly filled up in places. In some places it is filled with trees, and in some places it is filled with dirt.

Q—Who did it?

A—The dirt part was done under my direction; Dr. G. F. Thornton directed me to do it.

Q—Dr. Thornton works for Haggin & Carr, don't he?

133 A—I believe so. I didn't fil the channel with trees at all. I might have thrown some little brush in to help my teams to pass over, in scraping dirt in. There were three or four places I filled with dirt from 20 to 75 yards long, that was done last Winter. I don't know what was the object of doing that.

Q—Didn't you at the same time put in trees in that channel and fill it up?

A—I don't know what they put in. I was not there. I told them to put brush enough in so the teams could cross. I don't know that trees were cut and put in there.

134 My brother was foreman and superintended that work.

Q—Then I understand you to say that in 1875, when you came here, the South Fork people were getting their water through your canal for a short distance?

A—Yes, sir.

Q—Then it went into the South Fork and went down in what is known as the Mill Canal, and then was dropped back into the South Fork again?

A—No, sir; the only South Fork parties which we were furnishing water at that time—well, there was a little water taken out below the mill, for use on Sec. 31; the balance of it was taken out through the cotton ranch

135 ditch, and some through the town ditch.

Q—The water, after leaving the mill, went back into the South Fork again, continued on in the South Fork until 1878, and down through the old South Fork channel?

A—It continued; that is, a part of it did, and a part of it was diverted when I came here in Section 31, running down the range line, between Ranges 27 and 28. The water that was used by this mill escaped into the South Fork.

136 Q—Where does the South Fork empty its water, when permitted to run unmolested?

A—I suppose into Kern Lake. I never saw that time.

Q—I understood you that Kern Island Canal was using in 1876 about one half or two thirds of the water it is using now?

A—Yes, sir.

Q—The balance of that water went down into the South Fork, didn't it?

137 A—I don't understand your question.

Q—Didn't a portion of that water used there go into the South Fork?

A—No portion of the water that turned into the Kern Island went down to the South Fork. Oh, a portion of that which we were using went down the South Fork, for use on the Livermore ranch. I understand your question now. In 1877 the Kern Island Canal took a larger part of the water in the river. I did not say it took all in 1878. In 1879 we had the water all turned in at this point B. We turned a part of it out at this waste-gate G, back into Kern River again.

Q—That was after you had changed that head-gate?

138 A—Yes, sir. The river was dry from B to F.

Q—Then at another time did you take all the water and carry it out in the canal?

A—We didn't get it all down. We had nearly all of it, the same as in the year 1879. We turned the water down the river to parties below for their stock, a few days at a time.

Q—Between what dates did you have all the water in the river turned into your canal in the summer?

A—It was in the latter part of 1879, I think, that the dam was completed across, about the 10th of August. It

139 remained there until the rains commenced, along in the winter time. I think that the dam broke in December, although I am not positive.

Q—Then previous to August you did not take it all?

A—No, sir; we did not take all the water at any time in 1880. In the latter part of 1880, we had the greater part of it again. Our wing-dam was nearly across the river, but not quite. It would have taken a team and a day's time to have closed it. That was November and December, or October and November.

Re-direct Examination of

F. H. COLTON.

By Mr. HAGGIN. Q—Whereabouts was it that you set the brush and dirt and things you put in the South Fork?

A—There was some, I think, put in in Section 6, Township 30, Range 28, some in Section 5, and some in Section 9. The Kern Island Irrigating and Canal Company did not put that in.

Q—You said that in 1876 you used one-half to two-
141 thirds the quantity of water you now use. Do you mean to say that there was only one-half to two-thirds of the water then turned into the canal. or then running through the canal, that is now done, or do you mean that it was only used?

A—I don't think there was over two-thirds as much turned into the canal as there has been this season.

Q—Do you mean at all times of the year?

A—Well, we didn't use as large a head at all times in 1876; that is, what I call during the irrigating season.

Q—Did you not, as a fact, run down what is termed the mill canal here as great a depth of water in there in
142 1876 as you generally do in later times now.

A—I don't think we did, sir. I had charge of that mill canal in 1876.

T. W. BARNES,

Being recalled for defendant, testified:

By Mr. FLOURNOY. I reside at Canfield, Cottonwood grove. in Kern Co., Cal. It has been my home since 1863; I went there the 12th of January, 1863, and I have considered it my home ever since It is the only land I ever
143 owned. I am on Section 26, Township 30 south, Range 26, and I went there in 1863.

Q—How far is your section from Buena Vista slough that goes out of New River below the head of Old River, and down towards Buena Vista lake—Buena Vista slough canal, as it is called?

A—It is about seven miles from where I settled, to the slough between Buena Vista Lake and Tulare Lake.

Q—That is not the one, but Buena Vista Canal Slough, as it is called ?

A—Oh ! The Buena Vista Ditch on Buena Vista Canal. It was not a ditch when I went there. I made it. It was

144 a level country when I went there. I made the ditch from New River to Canfield and to Buena Vista Lake, and caused the water to run into the lake. I started that ditch in September 1865. I did it with a scraper and three yoke of cattle. I started from New River, I can't tell you the section, not any great ways from section 4.

Q—Was there any natural river there in 1865?

A—Yes, sir, the old dry channel. It is the same channel to-day as it was then, only it was dry then. It was filled in at the head and the water went down Old River. It broke through there in 1861 and '62, before I went to
145 the place. The water sometimes ran off down into Goose Lake Slough. I scraped the channel there, out on the plains, into the river, and up the river until I struck the water from Old River, and then turned a sandbank across to the river, so that when the water rose any in the river, it would take that channel across the country to my place. I threw up the sandbank with a V scraper. I cut down a big tree and cut out a V scraper, took my cattle and drove that back and forth, and threw up this bank, and then I opened out the other channel by the river, and out on to the plains. The Harris boys, my brothers-in-law, were interested with me in that work at the time.

146 Q—When did you first commence using water down in that slough or ditch?

A—I saw the water in that, I think, the first time I came to my place down the slough in 1866, but it did not run very long. It was only in time of high water.

Q—How long did you see the water there?

A—I don't remember exactly.

Q—I do not mean that year; but did you use it in 1867?

A—Yes, sir. In 1867, '68, '69 and '70. There were six or eight, I don't recollect exactly how many, were using water up to 1870; there was a company formed in
147 May. There came in a quantity of people there that wanted to settle, and they asked my permission to go in there with us and enjoyed the ditch, and I told them if they would go in and help make the ditch and grade, that they could enjoy the ditch so as to take the water for all the settlers, 26 in number; that was in 1870. Before that time, at different times, there were probably eight or ten using the water. Before 1870, I had in about 30 acres irrigated. I think the Harris boys had in about 80 acres. Mr. Waldron had in the neighborhood of 20 acres, and

148 Maganetta had in 15 or 20 acres. He started to put in 40 acres, but did not get it all in until the last of 1870. John Hogan, I think, put in five or six hundred acres in the Spring of 1870. Mr. Keith was living on the Watson place at that time; he had in about 15 or 20 acres.

Q—How much do you think, altogether, was irrigated by your ditch down there, before the company was organized and widened the ditch?

A—Before the head-gate was put in, there was a thousand acres, I suppose, more or less. The head-gate was put in in the Fall or Winter of 1870. It was a 30 foot head-gate there.

149 Q—What did the Company do that you speak of?

A—They went to work to point out the channel and put in this thirty-foot head-gate, that stands there yet.

Q—Do you recollect whether there was any notice of this appropriation by the Company?

A—Mr. Oulton brought the notice to my place, and told me he was going to put it up, and wanted I should go with him; but I was busy, and I could not go, and I got John Gordon to go there. I signed the notice. My name was on it. I saw it a good many times after it was put up when I was there at work. It was posted near

150 the head-gate. There was my name, the three Harris brothers—Jeff., James and Edward Harris—Waldron, Keith Watson, Maginetta, Carloch, Seymour, and one or two that, I don't remember their names, were on the notice. Those are a portion of the names that I remember were on the notice. It claimed 60 cubic feet of water for the purpose of irrigation and stock raising, irrigating land and water for stock and grain raising and farming. We claimed 60 cubic feet of water under a four-inch pressure for the purpose of irrigating; formed a company of twenty-six men, for the purpose of irrigating and stock raising and raising grass, and water for our stock. The

151 ditch was enlarged. I never measured the water, and I could not tell how much it carried. After that time we had a good deal more water when I ran the water down from the head-gate down the slough, than we had ever carried in the Buena Vista Canal. The acreage under cultivation has increased some since 1870, though Mr. Oulton dropped out and died. He was one of our biggest farmers at that time. It has increased materially from that time up to the present time; it increased some every year up to the time the new canal was built. I think the new canal was built in 1874 or 1875—in the fall of

152 1874, I think; but it was one or the other of those two years. Water has been used continually since from that canal. I have seen some water in it every year, and people irrigating. I sold out in 1875 or '6; I sold my interest.

Cross-Examination of

T. W. BARNES.

By Mr. HOUGHTON—Mr. Oulton dropped off in 1871,
153 I think.

Q—How much land was irrigated there, after he left, up to the time of the putting in of the new head-gate, in 1879?

A—I cannot tell you exactly. About the time Mr. Oulton dropped out, others came in. I think there was more irrigated after he dropped out up to 1875. I could not tell you how much there was in 1875. There was considerable land irrigated in that year. I think the acreage has been increasing ever since. The majority of the land that is under cultivation, irrigated from that ditch now, is owned by Haggin and Carr, I think.

154 The WITNESS—I understand there is some mistake in the way my testimony was, in regard to New River emptying into the slough down there. If I said it was the middle fork emptying in above and running in towards the bridge, I meant the main channel of the river, north of the middle fork of the north. There is where the river formed a sand-bar in 1867, across the slough, at the main channel. All of the water from that sand bar runs into the lake, toward the lake. The main channel of New River emptied in at this dam, which stops h slough, and the water goes down the slough, and all of the other water runs towards the lake.

155 Mr. HOUGHTON. Q—Did you say that the water in the South Fork at that time, in 1876, when the sand bars were formed, ran into the lake?

A—Yes, sir; but the South Fork and little sloughs, making off from the river, run into the lake. The other main fork of the river runs north, towards Tulare Lake. There is a sand bar forming right at the south side of where it empties into the slough.

Q—Where the middle or large fork empties into the slough?

A—Yes, sir.

156 Q—You call the middle fork the main fork of the river?

A—Yes, sir. I have not been there for two months and over. But when the river opened its channel the main fork, the main body of the water, went north, and the balance of those other little streams, the South Fork, ran into the lake, on account of that sand bar—of the sand bar.

THE COURT—That is an explanation of your former testimony?

A—Yes, sir.

157 Mr. GARBER—Who suggested to you that there was any mistake in your testimony?

A—I don't know; I heard it on the street; that my testimony did not corroborate some others; and I remember what they told me—that I had got the middle fork for the north fork or south fork.

F. H. COLTON,

Being re-called for the defendant, testified:

158 Mr. HAGGIN—You stated a few minutes ago, on your cross-examination, that in 1876 the Kern Island Canal carried from one-third to two-thirds of what it carried this year?

A—From one-half to two-thirds. There are two reasons for that. In the first place, that this season we are furnishing the Farmers' Canal Company with water through the channel of the Kern Island Canal. In the second place, in 1876 the channel was very badly grown with tules; it was cleaned out; I cleaned it out in the fall or winter of 1876 and 1877, with a large force of Chinamen, and that is the reason for it. In 1876 the

159 channel was choked up and the water didn't flow freely; after it was cleaned out it carried as much water in 1877 as it did this year and last year. This year we are carrying water to supply the Farmers' Canal Company in addition to what we use otherwise,

Q—Where is the Farmers' Canal?

A—The parties using water from it are in this part of the island; they didn't get water from the river through the Farmer's Canal because their gate is broken, I understand; their canal is closed up. We have been carrying our canal very full; we are carrying an unusual amount of water in it this year.

160 Cross-Examination of

F. H. COLTON.

By Mr. HOUGHTON—I could not tell who closed the headgate of the Farmers' Canal; I don't know, of my own knowledge, that it is closed; and I know the channel is closed below the headgate; I don't know who closed it.

Q—Don't you know that Haggin & Carr closed it?

A—No, sir. I didn't see it closed, nor hear any orders given whereby it was closed. The first I knew where it was closed, outside of hearsay, was when I
161 went over there about a year ago; a little over a year ago I went over to the place where it was closed; I could not say who it was who told me where it was closed; I was talking with some parties about the channel and they said it was closed; and my work took me around that way, looking after the ditch, and I found a ditch running over the place where it was closed.

Q—You speak of the Kern Island Canal being choked up with tules in 1875 and '76; what caused that?

A—Just the filling by growth of tules in the canal; it had not been cleared out for some time; there will
162 be a natural growth of tules in a channel that is not cleared out often; I suppose the seeds and roots probably catch in the banks, and they grow in the banks; we have to clear the canals every season; tules would, in time, choke the canal.

Q—Will there be any particular places in the channel where these tules will grow more than others?

A—Yes, sir; where there is the least current tules grow the more.

Q—Then if you should run a stream of water through a body of tule land and came to a place where it was a less grade than before, that would be a point where the
163 tules would grow in that channel?

A—Yes, sir.

Q—And that you found in that channel?

A—Yes, sir; where there is the least current and the channel is wider, the tules grow.

M. W. GATES,

A witness for the defendant, being duly sworn, testified:

(To Mr. FLOURNOY.) I reside in Bakersfield; I have lived in Kern County about eleven years. I first be-

164 came acquainted with the Gates Ditch in 1872, as near as I can recollect. A portion of it had been constructed when I first knew it; that ditch was finished either in 1872 or 1873; I am not positive which; I know I worked on it from the time it was commenced until it was finished; it was sometime during 1872 that I commenced work on it myself.

Q—There had been work on it before you commenced?

A—There was a portion of it—at the head it was let off and ran in a different place from the one that I worked on—that is, the lower part of it, and the head
165 of it was nearly the same. It was twelve feet wide on the bottom, and in some places it was pretty deep; the average depth of the ditch I should suppose is about from eighteen inches to two feet. In some places we had to build pretty heavy levees. The water was first used for irrigation in that ditch about 1872 or 1873; we continued working on it until it was finished; the water was used in it in 1872, and it has been used in it from that time to this ever since. I crossed there several times—not every year, but I crossed some three years ago, I believe, and I crossed it last year several times. I think we used it something like three years; I should
166 judge we did two or three years; I am not positive which. I have been down there frequently since; whenever I have been there there was water there; I never crossed it when there was not water there that I recollect of; I crossed it this month, and there is water there yet. I know the Anderson and Noble Ditch. There was water running in that ditch when I went to Section 4 in 1872—a portion of it; I think it has been running there every time I have been out that way; I know it was this morning when I went out there; I have no interest in the Anderson and Noble Ditch; I was interested in the Gates Ditch. I cannot say how large
167 the Anderson and Noble Ditch was. The Gates Ditch took its water from New River; I should judge from a quarter to half a mile from the head of Old River; the Noble and Anderson Ditch was taking water out between that and Old River. I have known Old River eleven years; when I lived in Section 4 I was in the habit of crossing Old River at the Anderson crossing, I believe, down here where the bridge is; I crossed it with teams, and crossed it on foot, and swam it, and in different ways I crossed it; there was a boat kept there, I think, in 1872 and 1873; I don't recollect whether it

was kept there up to the time the bridge was completed or not, but I think not; I think it got loose and went down the river.

Q—How was the water in 1872, '73 and '74 about crossing? Did you have to swim at any time during those years?

A—I have taken off my clothes and swam it with a boat, but I never went through there with animals when it was swimming, because I didn't like to risk it; I have swam across with a boat, with a little, small, flat concern.

Q—What kind of a body of water did it carry during 1872, '73 and '74?

A—I cannot tell exactly; I don't think there was a great deal of water.

Q—In ordinary stages, when Kern River was fairly full of water—not in the biggest freshet?

A—I have seen it there with full banks, and in another I have seen it running over the west bank in some places.

Q—About what is your idea of the proportion of water in Kern River that went down Old River and New River when they were fairly full?

A—I can hardly tell, because I don't recollect that I ever was over to New River much when the water was up; I know that Old River carried a large body of water at high stages of water; it has high banks along there at Anderson's Crossing, higher than they are generally on New River; the current was a good current; I could not tell how fast it ran, or how many miles an hour, but there was a very good current. I know when I used to swim it seemed like a good current.

Cross-Examination of

M. W GATES.

By Mr. HOUGHTON—I should judge the Gates' Canal, or ditch, is something near two miles long.

Q—How much land was there irrigated in that canal when you left there in 1875 or '76?

A—I cannot tell how much; I know about how much; my brother and I irrigated on Section 4. I could not tell, because there were six shares of the ditch; three of those shares were owned by my brother and myself; my brother's name is L. F. Gates; Mr. Norton owned

172 one share; I don't remember his first name; he lived on Section 4; he owned the south half of the south half of Section 4; Mr. Neideraur owned one share; I am not positive whether it was Mr. Hughes or Mr. McCaffrey who owned the other share; it seems to me it was Neideraur's partner, Mr. Hughes; I am not positive as to that; my brother and I owned the north half of Section 4, and Mr. Norton owned the south half of south half, and Mr. Gordon owned the other part of Section 4; Carr & Haggin, I believe, own Section 4 now.

Q—How much land was irrigated by yourself and your brother when you left there in 1876?

173 A—Perhaps 28 or 30 acres. I don't think Mr. Norton irrigated more than about 15 acres; I don't recollect that Mr. Neideraur irrigated any from that ditch while I was there; Mr. McCaffrey used water from the ditch, I believe; I should think he irrigated from 15 to 20 acres perhaps; I don't recollect of any one else irrigating from that ditch when I left there in 1876; I don't recollect what grade that ditch is built on; I know Walter James surveyed the ditch; I have no interest now in the Gates Ditch nor in the Baker & Noble Ditch.

174

S. H. Anderson,

Being re-called for defendant, testified:

Mr. Haggin. Q—Do you know anything about the Kern Island Canal?

A—Yes, sir; I know something about it; I worked on it in 1871; I worked at the Mill Canal.

Q—Will you look at this Map "K?"

A—There is the Mill Canal here, (showing on Map K), from point T; I worked on it from the first com-

175 mencement of it almost; they were working there probably about two months before I got there; I began, I think, about the middle of January, 1871, and I worked on it until the Mill Canal was completed; I turned the water into it sometime about the middle of May, 1871, from the South Fork; the water from the South Fork came from Kern River; a certain amount of water went into the South Fork all the time, but in the summer time and fall, when it gets down to a low stage, it is generally necessary to go up there and keep it in with a brush dam.

176 Q—Were you employed by the Kern Island Canal Co?

A—Yes, sir; I remained in their employ until the last day of July, 1875.

Q—Did you ever go up to the head of the south fork and turn the water in there?

A—That was my work there all the time; when we wanted water we generally used to get assistance from the farmers and ranchers round the neighborhood, who used to claim water out of that fork, to help us; that was the help we got mostly, along with what help the Kern Island Canal afforded. In the fall of 1871 we
177 turned some water into the South Fork by putting a little brush just at the point where it enters into the old South Fork channel; we didn't have much trouble getting water in that year into the South Fork; the Mill Canal was twenty feet wide at the bottom in 1871, when we built it; I don't think it is any larger than that in most places, now; it is a little wider in some places, from the fact that in the summer of 1874 I raised the bank on the west side; the bank of the canal where it passed along the edge of the swamp; I raised it up some feet, and we had to take the dirt from the opposite side to do it; but we did it with the head of water running
178 through it all the time; and with a head of water sufficient to run the mill; the mill was built in the fall of 1871.

Q—Did it use water from that canal at that time, in the fall of 1874?

A—Yes, sir.

Q—How did you get the water into the Mill Canal from the South Fork?

A—We had to dam the South Fork right immediately adjoining the head of the Mill Canal; right here (showing) at the point R on Map "K"; we put that waste-
179 gate in there at the same time; I put it in; I was in their employ after the Mill Canal was completed as the tender or sanquero; in fact, I had charge of shutting off and turning on the water in all these ditches.

Q—How was the water in there in 1872? Did you have water in the Mill Canal in 1872?

A—We had; we ran a big head of water there in 1872 in that canal; we ran more water than the mill could use.

Q—How full was the canal in 1872 when you were running water in it?

A—Perhaps two and a half feet of water; it would

180 look to be more, but come to measure it it would not be more than that.

Q—What other work did you do on this Kern Island Canal works?

A—We fixed a piece of the canal that extends from the head of the old South Fork up to where they take the water out at present, (showing on Map K); that is, from point K to where the old headgate was up there; that was in 1874; that canal that was built in 1874 extended to the river that piece; I built that in the spring, and we finished; the last work I did there was either the 3d or 4th of July.

181 Q—Was there any water turned into that?

A—No, sir; not then.

Q—Has there been any water in that?

A—There had been no water in it up to that time; the water was turned in that canal in August; that canal emptied into the Old South Fork, just below the entrance into the Old South Fork, right in here at point "K," (showing on Map K).

Q—Was there any water in the Old South Fork then?

A—No, sir; we put a dam across the Old South Fork just about where the water came in; above where we turned the water in that dam completely closed up the

182 Old South Fork; the reason of throwing that dam across the South Fork was, that we were afraid of the water running back into the river again.

Q—Did the Mill Canal ever take any water from the Old South Fork again?

A—Not in my time, or when I was in their employ.

Q—How long did that remain in the South Fork—do you know?

A—It remained in there until 1876; I don't know what time we took it out; this was in August, 1874, that this water was turned in there.

183 Q—Did you get any water in the Mill Canal during that year 1874?

A—I made a mistake about that dam remaining so long; it remained there until 1875 sometime; it remained there while I was in their employ; I don't know who took it out; that canal at that piece that I built there was thirty feet wide on the bottom; it had a good deal of fall to it, and the water ran very fast in it especially where it delivered itself into the Old South Fork; it ran rapidly. After August, 1874, we took the water out of the river from the head of this new piece.

Q—This at point F did you say?

184 A—As far as it extends now.

Q—Do you mean as far as it extends at present?

A—No, sir; they have made some alterations on it since and made it extend a little further, I believe.

Q—Do you know anything about the alterations since then?

A—No, sir; nothing more than I saw it there; that is all; I have seen the water in this Mill Canal of late years occasionally when I passed that way; I don't recollect the difference in the amount of the water in that canal of late years; the amount we turned in 1872 or 1873; we ran all the water we could get into it when
185 I had charge of the mill; as full as it would hold or run with safety to the embankment.

Q—Did you have anything to do with the Kern Island Canal anywhere below the mill?

A—I did some little work below the mill, but it is so long since that I forgot about it; I had some little work down there, cleaning out sloughs, but I cannot exactly locate the work now.

Q—You said at point R you threw a dam across the South Fork and turned it into the Mill Canal?

A—Yes, sir; that dam never was entirely removed; I never did anything with it; I used to repair it up, if
186 anything; I used to try to keep that dam there.

Q—Did you have anything to do with the construction of that canal from the place marked S on Map K?

A—No, sir; nothing more than they got the right of way from me through a portion of land there that I owned; at the time I speak of, when I was there in charge there, turning out the water; I believe the Kern Island Canal Company claimed the right to take the water from the river; whatever I did in those times I was doing for the company; the water that was turned into the main canal was used for irrigating and manu-
187 facturing purposes.

Cross-Examination of

S. H. Anderson.

By Mr. Houghton—I first knew the canal in 1871; all of the water came in at the South Fork that the Mill Canal took; until it reached the Mill Canal; that continued until August, 1874—up to August, 1874, when the water would come into the South Fork and was

188 taken into the Mill Canal; after the water passed the mill it ran down the Old South Fork channel; after the short canal was constructed from the river down to the South Fork, the water would drop again into the South Fork, and that continued along the South Fork to the Mill Canal, and then ran through the Mill Canal and dropped back into the South Fork again.

Q—And that continued so long as you were in charge of it?

A—Yes, sir; It continued through the Mill Canal down to the mill, and then, after passing the mill, went back into the South Fork and ran down the South Fork,
189 except what passed in through the town of Bakersfield in the town ditch.

H. NOBLE,

A witness for the defendant, being duly sworn, testified:

To Mr. FLOURNOY—I reside in Kern County, near Tehachipe; I have been a resident of Kern County since March, 1871; in 1871 I resided at Bakersfield.

190 Q—Have you any personal knowledge of the Baker & Noble Canal or ditch?

A—Yes, sir; I am the Noble who is connected with them; I constructed the canal; myself and Col. Baker; that canal was constructed in the spring of 1872; it was located on New River below the junction—below the division of Old River and New River; there was a notice of appropriation of water by that ditch posted; I wrote the notice myself and posted it; it was posted on the bank of New River; Col. Baker's and my name were signed to that notice.

Q—Do you remember anything about the substance
191 of that notice?

A—I cannot give the words; I cannot state exactly what the notice was at that time, it is so long ago, but the notice was posted on a tree on the bank of the river, claiming the water of Kern River sufficient to irrigate Sections 34 and 35, running in a southwesterly direction on to those sections; for the purpose of irrigation. I don't just exactly recollect the capacity of the head of the ditch, or the amount stated in the notice; somewhere in the neighborhood of sixteen to twenty feet, I think, the notice claimed at the head of the ditch. That

192 is what is now called the Noble & Baker, or the Anderson Ditch.

Q—Could you point it out on the map?

A—I probably could. (Referring to Map "I.") This is, I suppose, to represent the ditch.

Q—I want to ask you if it is a fair representation of it, substantially, according to your memory?

A—Not of the original location of the ditch; it is not; it is not properly represented here so far as the original location of the ditch. The head of the ditch may have been changed since. It should have been two or three hundred yards or a quarter of a mile below the forks of
193 the river, and it seems to come out right at the forks; that is the only difference I can see. I think we commenced using water out of that ditch for irrigation towards the last of May or the first of June; I know I had a large force on; I had to take the water—to construct the ditch in a short time—to save the crops. Between three and four hundred acres of land was irrigated by the water from that ditch in 1872. I don't know how much was irrigated in 1873. I lived there during 1871 and to the fall of 1872, and then I sold out to Mr. Anderson. As it was constructed in 1872, the ditch extended on to Section 10 in the neighborhood of three
194 miles and a half, I think. Mr. Cochran owned an interest in the ditch and conveyed the water on to his place on Section 10, I think; also a man named Hughes owned an interest in the ditch. I think the water has been used in that ditch continuously ever since 1872; every time I have been over the country I have seen water running in the ditch, if there was any in the river; I have had occasion to pass that ditch once or twice a year.

Q—When you were living over there subsequently, say from 1871 up to 1876 and '77, did you have any acquaintance with Old River?

195 A—Yes, sir; during 1871 I crossed in the neighborhood of a mile above the bridge—the present bridge on Old River. In 1872 I constructed a ford and cleared out a road just below where the old bridge now stands; Old River was quite high during a large portion of the year 1872.

Q—Do you know how it was in 1873, '4, '5 and '6?

A—No, sir; not as much as I did in 1872; I passed through there often and had occasion to notice; I crossed it frequently during those years.

196 Q—How did you cross at the Anderson crossing in those years?

A—I crossed a ford on horseback; in 1872 is the only time I ever used a boat. I was acquainted with New River below the head of Old River.

Q—What is your idea of the relative quantity of water carried at different times in those years by Old and New River, when you have had occasion to observe them?

A—I can only speak of the years 1871 and 1872; during those years, in an ordinary flow of water, I should think they would carry about equal amounts, though they were both full in 1872 a large portion of the
197 summer.

Q—When the water got lower, receded, how was it then?

A—Well, during those seasons I think that Old River would carry the most water, before there was any obstruction put in at the head of the river.

Q—Were you ever down on Buena Vista Slough?

A—Yes, sir.

Q—At Cole's Crossing? Cole's Bridge, as it is called?

A—Yes, sir; I think I was there in the spring of 1875 first—1874 or '75; I can't say positively which; there
198 was a bridge constructed there at that time; I didn't see any levee or dam about the bridge; the water was running around the bridge, and the water was quite high about where the bridge was; there was a good deal of water in that country at that time; a great deal of water.

Q—Was there any current in the water in Buena Vista Slough as you saw it there?

A—Yes, sir; quite a strong current running towards Buena Vista Lake. All the water that I saw passing through the channel was flowing down towards Buena Vista Lake.
199

Cross-Examination of

H. Noble.

(By Mr. Houghton.) Q—When you were on Buena Vista Slough in 1875 were you down at a point where any other of the branches of Kern River make into Buena Vista Slough?

A—I only noticed one on the north side of the bridge;

200 that was the only one I noticed there carrying much water; I didn't go anywhere else; I was down with a fishing party; stayed there a couple of days; camped over night; we were fishing in a boat just below the bridge; a quarter of a mile probably; no further than that.

Q—I understand you to say that the Baker & Noble Ditch notice was a notice claiming to take out water sufficient to irrigate Sections 34 and 35?

A—That was the original notice, before any others had gone into it; it was never put on record to my knowledge; I posted it in the fall of 1871; if it was put
201 on record I don't know it.

L. CRUSOE

Recalled for defendants.

Mr. HAGGIN. Q—Have you been down on that body of swamp land that lies north of what is known as Wible's Camp?

A—Yes, sir; I was down there last Saturday, the
202 14th of this month; I went down to the De Webber house.

Q—Will you point it out on the Map D?

A—Yes, sir; the De Webber house is on Section 20, T. 29, R. 24 (pointing). From there we followed across the swamp in the direction of Bonestell's, along the road marked "Wagon road, Bakersfield," about in that direction.

Q—Did you go to that channel there that is marked on the map on Section 30, or about there?

A—We went in this direction; struck the slough somewhere in that neighborhood south of Bonnestell's;
203 I suppose it was half a mile or probably three-quarters of a mile south of Bonestell's; we then turned down the slough near the Bonestell house; we crossed the slough just south of the Bonestell house, and went right up to the house and well.

Q—Did you find any water in the slough?

A—Yes, sir; after crossing at Bonestell's house we went in a north-westerly direction about a quarter of a mile, I suppose, in a north-westerly direction below the Bonestell house; there we found water; we could not drive in there; the water was out in the grass and tules there.

204 Q—How was it across the tules? Did you find any channel?

A—It was a low, marshy place, and we could not drive into it; we could see no banks.

Q—Any channel there where the water was?

A—None that I saw, sir; the water seemed to be spreading out there; the water was widening to the west.

Q—What did you see as to the slough?

A—I saw no bank to the slough; we could not drive in there on account of the water being on the western side. You could see no slough at all, only a marsh.
205 We could not drive into it, so we drove our horses around.

Q—Was there any slough on the eastern side?

A—No, sir; we were not on the eastern side; we could not see any banks; we turned then in a southwesterly direction towards an old pump; this place marked here on Section 26, Township 29, Range 23. Between Bonestell's house and the pumps we came to some water; we did not go back to Bonestell's house after leaving the point where we found the water was spreading out; we just struck right off in the direction of the pumps. We went straight to Bonestell's well and took a drink of water at the well, and then went in
206 a northwesterly direction; from Bonestell's well we went in a northwesterly direction until we could go no further on account of the marshy land, and then we turned in a southwesterly direction and struck a road going in the direction of the pumps. There were tules in that marshy land; they varied in height; tule grass and weeds; a low swampy plain; we saw no opening in the tules except the road. We came to water before we reached the pumps. I could not see any current through there; it is a low shallow place, I suppose a quarter of a mile wide; it varied in depth; I don't think
207 there was any of it knee deep, or more than that. We passed right by the pumps after going through the water. The tules were not thick. After passing the pumps we continued on in a southwesterly direction to the canal of the Kern Valley Water Company, in the same general course we were going before. From the pumps we took a straight course across, and followed the road to the edge of the swamp. After leaving the pumps we found water; a short time after we left the pumps; I don't think a few hundred yards; may be not that far. It varied in depth from ankle deep to knee deep, and some a little deeper than that; I suppose the

208 water was from half to three-quarters of a mile wide as we drove through that swamp and marshy land. We came within a few hundred yards of the canal, I should say. In crossing occasionally we would come to high places along the road where there would be no water—little knolls. There were tules growing there; the tules were regular in their growth.

Q—Was there any channel through there?

A—None that I saw. After reaching the canal we followed it and turned right up the bank of the canal or levee, and followed that right along to the headquarters camp, and on to Buena Vista Ranch. As we went along
209 the levee we could see water on the edge of the swamp all the way along. The water appeared to be as wide across there as the place where we crossed; we saw no water in any channel along the edge of the swamp. The water varied in depth as I said, from ankle deep to belly deep to the horses. The next day we went back to the swamp again; this was last Saturday, the 14th day of May. The next day was Sunday and we went back to the swamp; we went down the levee of the Kern Valley Water Company until we passed the East Side Canal. We got out of the wagon and walked down in the general direction of the slough about opposite
210 Crocker's house. We found water in some ponds standing before we reached Crocker's house; I don't know that I can tell what section Crocker's house is on; it is somewhere here on Section 10, Township 30, Range 24; about that; the water was confined to the banks there; we crossed the slough near Crocker's barn; we went to the well and got a drink of water, and then got over the fence into the barley and alfalfa field and we followed along the general direction of the slough, I suppose nearly a mile. The water was along the ditch in by the fence, and we were on the west side of the slough; near the slough, not immediately on the banks, but in the
211 vicinity of the slough; in sight of the tules all the way down; we did not get to the slough until we got I suppose nearly a mile below Crocker's house; then we got right into the slough, and there we struck the levee; followed the levee back towards Crocker's house right up to the barn again; right where we had started from.

Q—Where was that levee in reference to the slough?

A—It followed the general direction of the slough not along the bank all of the way; at times touching the main slough on the west side.

212 Q—How were the banks of the slough along that levee between that levee and the slough?

A—Well, in places on the east side of the levee we could see the water standing in low places on the east side of the levee.

Q—Was the water in the slough or out of it?

A—We could not see; I suppose it was out of the slough; there seemed to be marshy places.

Q—Well, how was the west bank of the slough along there? What did you see from the levee?

A—The west bank of the slough?

Q—Yes, sir; on the east side of the levee; I under-
213 stand you the levee was on the west side of the slough. How was the bank of the slough between the levee and the slough itself? How was the west bank of the slough along there that you could see?

A—For some distance we did not go to the main slough at all, or to the bank of the slough; from this levee we followed down the levee, right on the levee; the levee touched the slough, in some points right up to the bank of the slough.

Q—How was the bank at this point where it touched?

A—Well, the bank was the levee itself in places; no natural banks there outside of the levees.

214 Q—No natural banks there?

A—None that I could see, except the levee; the water was up against the levee, and in places we found the water standing on the east line of the levee for some distance.

Q—Did the levee keep the water in the general course of the slough there?

A—I should say it did. After going back to Crocker's, we then started and got over the fence right at that barn, and started right down the levee again, northward; we followed that out to the end of the levee; that
215 was about a mile, or something over a mile, I should judge; the levee runs out on high ground and we followed then the direction of the slough a few hundred yards; we found water on our left—that is, to the west; we followed the slough in a north-westerly direction; the water to the left was not in a channel; it seemed to be a low marshy place; it did not seem to have any current when we first saw it; we continued along down the slough until we found——. I could not determine the width of the water to the left of us. As far as we could see the tules were all grown up there to our left, so that I could not see the outer edge of the water, the extreme

216 western edge; before we reached that point we found water in the tules along on the west side of the levee, before we reached the end. One place that I noticed particularly was where the fence crossed in this direction, I suppose running east and west. There was a large pond there. Most of the fence was under water; the levee there ran right across to the eastern edge of the pond, between the pond and the slough; the levee extended clear across between the pond and the slough; there was no opening there through the levee; the pond was probably a half or quarter of a mile from the northern end of the levee.

217 Q—After you reached the northern end of the levee, where did you go?

A—We followed the direction of the slough on the high ground. The levee runs out on high ground; that high ground was the bank of the slough; that extended a few hundred yards in a north-westerly direction until we came to water again on our left; then we went down until we came where the water runs out of the main slough in a westerly direction. The first place we struck it, I suppose it was five or six feet in width, and no depth, running out westerly; then on the north side of that low place that ran out there, was another piece of

218 high ground that extended along for some distance, and then, on the opposite side of that, the water ran out again; and we crossed that water. We followed the slough in the water the most of the time; we were on foot.

Q—Did you go into the slough at all?

A—Yes, sir.

Q—How deep was the slough below the level of the country where the water was spreading out?

A—We did not cross the slough; we waded along the edge of it. It varied in depth; just at that particular

219 place though, it was waist deep.

Q—Did you go along in the slough at all going northward?

A—Yes, sir.

Q—How was the bottom of the slough in different places compared with the outside country where you found water?

A—Well, in places where we waded in it, where this water was running out, there was not a great deal of difference right at the edge of the slough between the depth of the water in the slough and that outside. I suppose it would be if we had gone across, we would

220 have found it deeper; I don't know. From there we followed the direction of the slough in the north-westerly direction, and went down to the willow tree that is on the edge of Weed Island in that vicinity; and when we came to one of those places where the water ran out of the slough, we followed it along and waded across it. And where the water had run out of the slough, there was no channel; it was all grown up with tules; I could not see any channel.

Mr. HAGGIN. Q—Well, was there any channel there?

A—Well, there were depressions that carried the water off; there had to be. The water was flowing from
221 the slough in a westerly direction.

Q—Were there any banks to those depressions, any defined banks at all?

A—We would find sometimes high ground on the south side, and sometimes on the north side, there was also high ground on the north and south in these places; they were not uniform in width, and sometimes on the western side we would find the banks, where the banks would go right out of the main slough, and the water would be going out on the eastern side; and we would follow them down a piece and come to water going out on the western side, and the bank would be on the
222 east side of the slough. The water was running out in places all the way down; I did not count the number of places. After reaching the willows we followed along the line of an old ditch or canal that had been partially constructed. We did not find any water in there until we got up I suppose about a mile up this old ditch, and then we found water; the first we found seemed to be standing; that was on the west side of the canal; it was right up to the western bank of this ditch, and we found water on the east bank too. We found cuts in this ditch where the water came up against the western bank, and would flow through to the eastern side. The first place
223 of that sort I think we found, is about a mile from the willow trees.

Mr. HAGGIN. In what direction does that ditch run?

A—I don't know whether I can locate the willow trees on the map; probably I can. The general direction of the ditch was in a southeasterly direction; southeasterly from about where the willow trees were; we got right into it right at the east of the willows; probably 75 or 100 yards east of the willow trees. There was water on the south side of that ditch; in places we found it ran down the line of the ditch; the ditch

had been but partially constructed, I think—probably four furrows ploughed up and down the banks, two on the inside, leaving a line right in the center of the ditch; and then two furrows on the outer edge that formed the two banks. There was water outside of the ditch; we found water to our right, going up this ditch in a southeasterly direction. I could not determine the quantity of water. The first we struck was out in the tules to where the tules were very heavy and thick; I could not see the extent of it; it was on the tules. The tules ran right up to this ditch; and after we went further up the ditch we found water running right down by these outer furrows along the line of the ditch until it would get to these openings through the ditch, and then it would go out on the east side, and there it spread out among the tules; and it was the same on the west side. We followed up this ditch until we came to a very well defined levee, and we followed that up I suppose a mile, and went out on the east side of the canal. In following up that canal we found water on the east side and on the west side, too, but not in a channel. I did not see any channel there. As far as we could see there were tules to the east and west of this levee, and water all through it.

Q—Now, from the whole round trip that you made there of these two days, taking them altogether, did the water appear to be confined in a channel at all?

A—No, sir; we found the water all over the country; we were in water from the time we left Crocker's house until we got back on that levee; on the east side, with the exception of the time that we were on the Island, of course we found dry places.

Cross-Examination of

L. CRUSOE.

Mr. HOUGHTON. Q—You say you crossed the slough at Bonestell's house?

A—Yes, sir; south from Bonestell's house a few hundred yards. We found the water confined to the banks where we crossed it there.

Q—How deep was it?

A—It ran into the bottom of the buggy.

Q—How wide was the slough there?

A—I suppose 50 or 60 feet wide. And from there

228 we went to Bonestell's house; and from Bonestell's house we went in a northwesterly direction; we drove along westerly in the direction of the slough; we were not on the immediate bank of the slough in going from Bonestell's house. I don't remember that we came to a levee after leaving Bonestell's house.

Q—Did you attempt to cross any of the water that you struck going northwest from the Bonestell house?

A—We drove into it until our horses commenced to bog, and we turned around; we probably drove into it the length of the horses, not more than that. Then we turned and went southwest until we came to the pumps
229 on Section 26; we followed the road. We came back until we struck the wagon road through there; we struck the wagon road before we came to the pumps.

Q—The second day that you were down there, when you drove along that levee—you went down the east side, as I understand you, on the slough?

A—Yes, sir; until I came to a point right opposite Crocker's house, and I crossed the slough at that point.

Q—How deep did you find the water?

A—I did not wade it there; we crossed on a wire stretched across with some old panels on it.

Q—How wide was it at that point where the panels
230 were?

A—I think it was fifty or sixty feet wide.

Q—Did you measure the depth of the water there?

A—We ran a stick into it.

Q—How deep was it?

A—About six feet, I think.

Q—Was there a current at that point?

A—Yes, sir; a sluggish current.

Q—How was it at the place above Crocker's?

A—About the same; probably more of a current at Crocker's than below. We went along the fields below Crocker's about a mile to the north, and there struck
231 the slough and came on the levee; the levee followed the general course of the slough.

Q—It didn't follow along the slough?

A—Well, it didn't follow the banks.

Q—How many times did it touch the banks of the slough from the point where you got on to it until you got back to Crocker's?

A—I don't remember how many times between the time we got on to it and when we got back; I did not count them; probably three or four times.

Q—Did you measure the water in the slough at any point where the levee touched the slough?

232 A—I did not.

Q—After getting back to Crocker's, where did you then go?

A—We went right back, retraced our steps down this levee, and after going to the end of the levee went over a few hundred yards on high land, and then came to water running out in a channel, or water-course, or depression that was about five or six feet wide.

Q—Then, going from there along that elevation, you came to another depression like it, with water running out?

A—Not like the other one.

233 Q—What was it?

A—It was much wider and deeper. After leaving that we followed the general direction of the slough clear down to Weed Island, to the Willows. I don't think I know what section the Willows are on; the Willows are probably (referring to map) I think they are somewhere about Section 32, Township 29, Range 24; on the south half. I think.

Q—You said, Mr. Crusoe, that when you reached these little channels, where the water was running out to the west, before you reached the island, you waded out into the main slough—how far did you wade out?

234 A—Times, I suppose, I was half way out.

Q—You did not cross it at all?

A—I did not cross.

Q—After getting down to the willows, where did you then go?

A—We followed the line of the old ditch or the canal up to the East Side Canal; we were then on the east side of the slough.

Q—How did you get across?

A—We waded across the slough right at the Willows.

Q—How deep was the water there?

235 A—It was within a few inches of our armpits.

Q—How wide was it?

A—About 60 or 70 feet wide.

Q—Was there a current there?

A—Yes, sir; I did not see any road or ford at that place.

Q—Did you at any point while you were on that slough see a road or ford?

A—Anywhere along the line of the slough?

Q—Yes, sir, after you left Crocker's house?

A—The second day; no, sir.

Q—Then I understand you came to an artificial levee there, that had been thrown up on the east side?

236 A—It acted as a levee, and it was started as a levee, as an attempt in the preparation of this ditch, the building of the ditch; it ran through this marshy land; it did not go immediately up to the bank of the slough; it ran to the east and west; that is the direction of it; we followed the ditch until we came to this defined levee; we got on to that, and followed it up to the salt grass, lying out to our left; we turned across from that to the East Side Canal; there was some water in the East Side Canal running in it.

Q—Where was it discharged?

A—I did not go to the end of it; I don't know where it
237 was running out; we did not follow the slough below the Willows at all; we stopped at the Willows, and then went off in a south-easterly direction from the Willows.

Q—You say that the second channel, after passing this island where the water was running out to the west, was deeper. How deep was that channel?

A—Well, in places it was waist deep.

Q—Was there water running when you waded this crossing at the Willows?

A—Yes, sir; there was some current there.

Q—Who was with you on that trip?

A—Mr. McMurdo; no one else. From the time we
238 left Crocker's until we got across the slough we were alone. Mr. McMurdo was also with me on the first day. The first day we drove over there in a buggy. On the second trip we were alone after we left this levee there before we got to the headquarters camp.

Q—Who was with you prior to the time you reached Crocker's, besides McMurdo?

A—He and I were in the buggy together; before we reached that point Mr. J. R. Dixon was in the buggy with us; no one else. There was another buggy along; Mr. Fillebrown, Mr. L. L. Dixon and Mr. W. L. Dixon were in that; those were all the persons that were along
239 on that trip. I am in the employment of Mr. Haggin, and have been since 1877.

T. R. Fillebrown,

Recalled for defendant, testified:

Mr. Haggin—I understand your Honor has granted us permission that we might recall different witnesses in this way for different branches of the subject.

Mr. McAllister—Not indefinitely, I hope.

240 The COURT—I trust not myself. The complaint in this case covers a very large scope of country.

The WITNESS—I first came to this country the 1st of March 1871; have resided here the most of the time ever since, and have been away a small portion of the time.

Q—Were you last Saturday or Sunday in any portion of this body of swamp land, north of Wible's Camp, in that vicinity, around Wible's Camp?

A—I was, last Sunday.

Q—Whereabouts did you go last Sunday in the swamp land?

241 A—I followed along the levee of the Kern Valley Water Company to the head-gate, or to the head-gate of the East Side Canal. I think I went beyond that down to the slough, and followed down that slough to the bunch of willows, on what is known as Weed Island, I believe. That is, I followed the slough a part of the time; went along through the swamp lands. The levee of the canal that I followed [referring to Map D], runs along the north line of Section 24, T. 30, R. 24. We traveled along the levee until we came to the waste gate, which discharges in the old slough on the north side of the Kern Valley Canal. That
242 levee represents the north bank. We traveled on that levee. We first went to the East Side Canal, and then went beyond that to the slough.

Q—Went on beyond that to the slough. Was that the main slough there, do you know?

A—Well, it had the appearance of being.

Q—Is that the slough that runs right up in the vicinity of Wible's Camp?

A—Yes, sir. We left the levee there near the head-gate, the waste gate discharging into the slough; that is on the levee of the main canal at the waste gate.
243 From there we followed down the slough. We kept right along close to the bank of the slough to a point opposite Mr. Crocker's house, and a little below there, two or three hundred yards. We were on the east bank, or the northeast. I believe Mr. Crocker's house is on Section 15, T. 30, R. 24, very near the north line, on the northwest quarter [points it out on Map D]. In going along the east side, opposite Crocker's house, we struck a little overflow from the slough, which was almost stagnant, moving very slowly out from the slough. It was running in no channel. It was spreading out a good deal on the east side of the

244 slough. We went on down the banks of the slough as well as we could, and came across a great many of these short bends, and here and there we found water. We went out to the edge of it, and in some places waded through it; we generally waded through it to save a great deal of distance. The first place we came to water below this place opposite Crocker's, was 200 or 300 yards below Crocker's house.

Q—Was that water that you found in the slough?

A—No, sir; when I speak of finding water I mean outside of the slough. There was water in the slough. This water was on the outside of the slough; on the
245 east side. It was not in any channel on the east side of the slough. It was all spread over the tules.

Q—Where did this water come from that was spreading out over the tules?

A—It came from the slough overflowing its banks. We found such places very frequently from there down. I could not state how many. There were here and there high points in the banks where they were not overflowed, little islands all along among the tules which were not covered with water, and, generally speaking, the ground outside of the bank of the slough was covered with water from there down. I was walking on the bank of
46 the slough on the east side. I never confined myself to the banks of the slough. We cut across these points. In many places we were away back a quarter of a mile, perhaps, or more, from the slough, and we would strike these overflows.

Q—Then, how far did you follow generally the slough there?

A—We followed it down to the willows on Weed Island.

Q—Whereabouts were the willows; can you fix it on this map where they were?

247 A—I am not positive; but I think they were at the sharp bend, on the southeast quarter of Section 32. That is about the distance that I estimated we had traveled, and they were at a bend similar to that where it takes a sharp turn to the westward.

Q—Now, there is on this map, marked in blue here, "Central Cut." Did you find anything on map D, and did you find anything of that nature going through there, a cut?

A—I found what appeared to be a partially constructed ditch and levee in that vicinity. My impression is that it was further back from the slough than is represented by this blue line.

248 Q—Before you reached the willows, how far did you follow right along beyond Crocker's house? Right along the slough?

A—It makes a sharp bend here to the southwest.

Q—Did you continue right along southwest from the "Central Cut"?

A—No, sir; after striking that levee we followed that bank right on top of that levee.

Q—How was that levee with reference to these willows that you speak of?

A—Well, it commenced a long way above them; then it followed down to some distance beyond them. But
249 we followed it to a point opposite the willows, and then went into the willows, which stood right on the bank of the slough. We were on the eastern side of the slough all the time. I struck that levee right near where it leaves the bank of the slough. I could not be positive as to what section it leaves the slough. If this map is right, it is on Section 3, near the line between Sections 3 and 4, but I don't remember the number.

Mr. HAGGIN. Q—This which is marked there "Central Cut," is not the levee?

A—I say this levee is some where near there; near where that "Central Cut" is marked. I think it is
250 farther back from the slough?

Mr. MCALLISTER. Q—Is that the levee that Mr. Souther threw up?

Mr. HAGGIN—I think it is.

The WITNESS—I knew nothing about that levee. I was not there when it was made. At the south end it has the appearance of being just one levee thrown up probably three feet high, and further down there are two levees which look as though they had started to build a ditch; thrown up both levees, and never taken out the centre. After striking this levee we went down to
251 a point opposite the willows on the levee, and from there we went right straight into the willows at that point on the slough. There was high ground between this levee and the willows. We crossed quite a high piece of ground. But over to the eastward of the levee opposite some point, there was some overflowed land. We did not go through the channel of the main slough at all. We stopped there and rested a little while, and took a drink of slough water, and then took as straight a line as we could to the highlands north-east. In doing so we crossed quite a wide stretch of overflowed ground. The levee of the Kern Valley Water

252 Company crosses the slough right about where the waste gate is that I speak about. The water was flowing from the waste gate. That was the only way for the water to get through there that I could discover. I have made the measurement of the water running through the waste gate, made it on the 20th of April last, at that time there was 17½ cubic feet per second. I never made any other measurement.

Q—In going along there from Wible's camp up through to the willows, can you state from your observation of that country, whether or not there is any slough, or water channel, east of this marked as the
253 main slough there?

A—No, sir.

Mr. McAllister. Q—What "marked main slough" do you mean? I suppose he means marked Buena Vista Slough?

Mr. Haggin—Marked Buena Vista Slough on this map D.

Mr. McAllister—What point do you refer to?

Mr. Haggin—From this point here up to where he struck the willows. I asked him whether there was any slough on the east side of this marked "main slough."

254 The Witness—No, sir. I was unable to find any channel, at all.

Mr. Garber—It is not marked "main slough?"

Mr. Haggin—No, it is not marked "main slough."

The Witness—It is marked "Buena Vista Slough," on the map.

Q—Did you find any slough running from that which is marked "Buena Vista Slough," on map D, to the east?

A—No, sir; simply this overflow that I have described; that is all.

255 Q—Mr. Fillebrown, have you ever made any surveys or surveyor's work whatever, whatever it might be termed, in any portion of that country?

A—I ran some levels across the slough, across the swamp lands.

Q—Whereabouts? What levels did you run across the swamp lands?

A—I ran a line of levels across near the 7th standard, beginning about a mile and a quarter south of the 7th standard—beginning, I think, on Section 11, and running due west, through Sections 10, 9, 8, 7, and on to 12, in T. 29 S., R. 23. Section 12 is in T. 29, R. 22.

256 In running these levels, we went from the extreme eastern side of the body of swamp land to the extreme west side.

Q—In going through there, did you find any channel at all?

A—No, sir; except a stagnant pond.

Q—Was that a channel—that stagnant pond?

A—No, sir; I should think not; it had no inlet or outlet.

Q—No inlet or outlet? You went around it?

A—I did; I assisted in making the profile of that leveling that I ran through.

257 [A profile is shown to the witness, and he is asked]: Will you look at this and see if this is the profile you assisted in making?

A—That is the same I made from my survey. [The profile is marked defendants' Exhibit L].

[Here insert.]

Q—What scale is that profile made on, Mr. Fillebrown?

A—The usual scale adopted in drawing railroad profiles. The difference between the vertical; the light
258 vertical lines represent 100 feet; the heavy vertical lines 1000 feet; each of the horizontal lines represents one foot in elevation; that is, the smaller lines and five feet between the heavy lines. The proportion of the vertical to the horizontal scale is nearly twenty to one, if made on a scale of one to one, the fluctuation on the line would hardly be perceptible to the naked eye. That is the reason for making a profile paper that way, to show more prominently slight elevations or depressions in the ground. To represent this profile correctly, it would
259 require a length of nearly twenty times as long as this. That is, the same space which represents five feet in vertical height, represents about 100 feet in horizontal distance. These same undulations in the ground, represented on an exact scale equal to the horizontal scale, each fluctuation or undulation here would only be one-twentieth of what it now is, as it stands on the paper. The difference in elevation between any high point and low point, as represented here, would only be the twentieth part of what is represented. This is the scale I think universally adopted in making railroad profiles.

260 Q—Does this profile of the elevations which you ran through Sections 10, 9, 8, 7, and a part of 12, correctly represent it according to that scale which you have adopted?

A—Yes, sir; that is the top one, shaded in blue. The different lengths here represent different pieces of ground.

Q—Now, in going across there, you said you found no channel, but you said you found a pond. Can you point out on this profile where this pond was? Have you your notes with you?

261 A—I have the notes. I can give the description of that work very nearly without my notes. I cannot give the exact figures without them. My notes were made at the time I ran this level on the 28th of April, I believe, 1881. These notes were made by myself. They are correct. This levelling was run south of the 7th standard, about a mile or a mile and a half south; less than a mile and a half.

Q—Will you look at these notes now, and describe this leveling that you did, where you began, etc.?

A—I began at a point on Section 11, perhaps 100 yards or more, south of the old cabin, kept now by a

262 man by the name of Harrold, who is in the hog business. I ran from there due west, commencing on Sec- 11, T. 29, R. 23 E. That point of beginning is at the left end of the profile.

Mr. HOUGHTON—Then it is reversed?

A—Yes, sir; it is more convenient to plat a profile from left to right, that is all. The point of beginning on that profile is at the point marked "B. M. 100."

Q—Will you follow that out with your notes, and describe the first few feet that you ran through?

A—Do you wish me to read the elevations of each 100 feet as I go? The greatest deviation that I found

263 on the first 1,000 feet was one foot and four-tenths. To be nice about it, $1\frac{36}{100}$ feet. We usually read the nearest tenth. I suppose that will do, wont it.

Mr. MCALLISTER—Oh, yes; that will do.

A—The first thousand feet was comparatively a flat country, grown up with tules most of the way. The second thousand feet, the lowest point we reached was the end of the second thousand, 1.75 feet lower than the initial point. B. M. I. means Bench Mark, and we assumed 100 as the elevation simply for convenience. And this point of 2,000 feet is 98.25. This second thousand feet was tules, the same as the other.

264 It is gently undulating. There is no channel at all through it.

Q—I believe you said there was no channel through any of these?

A—There is no channel; there was no perceptible difference in the next thousand feet. There was one undulation of nearly 2 feet, 1.96—that is, 2700 feet on the line; 1.96 lower than the initial point. I do not mean that at the 2700 feet point it drops down 2 feet; it drops down gradually from the initial point. If it will do any good I will read my notes right along from the beginning.

265 Q—Yes, sir; just read them from the beginning. [The witness reads as follows]: "B. M., 100." If you will allow me, I will not repeat my stations, and you will understand that the elevations I give you are just 100 feet apart—just one station apart.

Q—Well, sir.

A—The nearest tenth will do, I suppose?

Q—Yes, sir.

The witness reads as follows:

"Station 1.

99.9	100.1	100.2	99.2
99.2	99.2	100.5	99.5
266 99.3	98.6	99.3	98.5
98.5	98.6	98.7	98.4
98.5	98.8	98.8	98.3
98.5	98.8	98.5	98.1
98.2	98.1	98.0	98.2
98.7	98.5	98.4	97.9

Mr. HAGGIN—Excuse me. What station is that 97.9?

A—Station 32.

Mr. GARBER—Is that the lowest point you speak of?

A—That is a little further along.

267 Mr. MCALLISTER—Each of those lines stands 100 feet apart?

A—Yes, sir.

Witness continues reading as follows:

97.7	97.5	97.5	97.5
97.5	97.2	97.2	97.5
97.2	97.5	97.0	96.3
96.9	97.0	96.9	96.9
96.6	96.7	96.8	96.4
96.4	96.4	95.9	96.5
96.6	96.4	96.6	96.4
96.6	96.7	97.3	97.3

268	96.8	97.3	97.2	97.0
	97.0	96.7	96.9	96.8
	96.8	96.6	96.7	96.6
	96.6	96.5	96.5	96.6
	96.7	96.5	95.9	95.9
	95.6	95.6	95.7	95.7
	95.6	95.7	95 3	95.4
	95.2	94.8	94.6	94.4
	94.2	94.7	94.4	94.4
	94.2	94.5	93.4	94.3
	94.2	94.0	94.2	94.2
	94.0	93.5	93.6	93.6
269	93.9	93.8	94.2	94.4
	94.3	94.3	94.3	93.8
	93.9	93.3	92.7	91.9
	92.9	92.9	93.3	92.9
	92.9	92.5	93.7	93.0
	92.9	92.9	92.3	92.5
	92.3	92.8	92.4	92.4
	92.2	92.8	92.9	93.1
	92.8	93.0	92.5	93.2
	92.4	93.2	93.9	94.3
	93.9	93.6	93.7	94.2
	93.9	94.0	94.0	93.7
270	93.7	93.7	93.3	92.9
	93.2	93.2	92.9	93.0
	93.7	93.5	92.8	92.9
	92.8	92.8	92.5	92.3
	92.1	92.4	92.3	92.7
	92.4	92.7	92.5	92.4
	92.5	92.2	92.7	92.3
	92.4	91.7	91.1	92.1
	91.9	92.0	92.0	92.1
	91.9	91.6	91.8	91.9
	91.9	91.9	92.0	92.3
	92.0	92.6	92.7	92.8
271	92.6	91.6	91.4	91.5
	91.7	91.7	91.2	91.1
	91.3	91.6	90.6	91.4
	91.2	90.8	90.5	90.4
	90.6	91.1	90.8	91.4
	91.3	90.4	90.7	90.8
	90.5	90.8	92.7	91.6
	91.3	90.9."		

That was at the end of the fourth mile, which was fairly outside of the margin of overflowed ground. We had then got entirely across the swamp and overflowed

272 land. The elevation at the 4th mile was 90.9. That was at the end of my continuous level notes. At intervals of 100 feet at that point I took a bearing towards a post standing at the centre of Section 12. I measured the distance with a wagon wheel end odometer, and found it to be about 16 chains. I also set up a level half way between, or about half way, between this point and the levee of the Kern Valley Water Company's Canal, and took a sight on the top of the levee, and found the elevation of the top of the levee to be about 98.4. I did not take continuous levels at intervals of 100 feet between those two points, but it is a
273 gradual rising slope from there. From where I had my last station to the bank of the canal.

Q—Have you given your levels from there to the bank of the canal?

A—I stated that I did not take continuous levels at intervals of 100 feet. I simply took the extreme at the bank of the canal, which is 98.4, as represented by this high point marked "Top of Levee, K. V. W. Co." That is the end of that. I mention that I noted an island; it was a little high point there, among the tules; quite a high piece of ground. There was a point on it three or four feet higher than the point that we ran across. I cannot
274 say definitively how large it was. It extended for some little distance to the northward, and a very short distance to the southward. Probably the island was directly south of us 150 feet. That island was not one of the banks of the channel. There was no channel there to have any banks that I could find. I never found any channel aside from this pond I was speaking about. I did find ponds in that line of levels. That line of levels wound around the south end of this pond I speak of.

Q—Where did you strike that pond?

275 A—I will show you if you give me the notes. It was at the 115th station.

Q—Well, you struck the pond at the 115th station?

A—I struck the pond at the 115th station, that is marked on this plot as 115. The west bank is on 115. That is the west bank. Station 114 was the east bank. It was perfectly stagnant water; almost a foot deep, I think. I don't think I measured it. I never ran through there.

Q—How wide was it right there?

A—Right there it was 20 to 30 feet wide at the water's surface proper; 60 or 70 feet between the banks. The

276 eastern bank has a very gradual slope, running back 100 feet or more. The western bank is a little more precipitous. In fact, it is quite straight; nearly four feet from the top of the bank to the bottom of the slough.

Q—After the 115th station what did you do? Where was the next station?

A—Well, it was due west on the same line, continuing right west on that line; 116 was due west on the same line; on the original line.

Q—Did you go around the pond, and run the levels around?

277 A—We ran levels around the south end of it. They were just about the same; showed the same character of profile as the balance of the ground. If necessary, I could select the notes included in that detour around the pond, and read them separate from the others.

Q—Select those notes that are included in that detour around the pond.

A—Leaving the straight line, I ran an irregular line around the south end of the pond.

Q—What was the shape of the pond where you left the straight line at Station 115?

278 A—It is impossible for me to describe it. It was very irregular in shape; it was very much wider at a point south of our line. That shows it to be wider 200 feet or more; perhaps 200 or 300 feet. A perfectly stagnant hole. We drove right around the south end with our wagon; drove our wagon around, and then took levels.

Q—Give the levels around the pond.

A—Leaving a straight line on the east bank of this pond, I made a detour to the south. Station 114 was at the east bank of the pond. Then going south, it reads:

279 "

92.9	92.9	93.3	92.9
92.9	92.5	93.7	93.0
92.9	92.9	92.3	92.5

at the southeast extremity of the slough or pond."

Q—Was there anything of a slough further south than that?

A—No, sir; that was the complete end of it. Then we ran around the south end of the pond as follows:

92 3	92.8	92.4	92.4
92.2	92.8	92.9	93.1,

to the southwesterly extremity of the pond. Then

92.8	93.0	92.5	93.2
92.4	93.2	93.9	94.3

280 Station 115 being then on the west bank of the pond on the original line, back to the original line.

Mr. HOUGHTON. Q--What was the elevation of Station 114?

A—91.9, sir.

Q—What was the elevation of Station 115?

A—94.3.

Mr. GARBER—100 feet apart?

A—Yes, sir; about 100 feet apart. Station 114 was a part of the way down the eastern bank of this slough. As I stated before, the eastern slope is very gradual. It is very gradual clear through to where the bank of
281 the slough begins, and the western bank is very precipitous. The elevation of Station 113 is 92.7. We went completely around the southern extremity of the pond. No inlet at all. It was entirely grown up with tules; very dense. We had to drag our way through there with the wagon.

Q—Now, in giving the different stations that you have given, 100 feet apart, how was the land from one station to another? Suppose you came to a place between the intermediate stations that was deeper than the outside, would you make a note that you noticed
282 any such place in the intermediate spaces?

A—I crossed two little depressions that happened to come right between the stations, perhaps a foot below the general lay of the ground, but they were not over one or two hundred feet in length. I could see either end of them; just little gullies. They were not continuous depressions at all. They ran out in 200 or 300 feet They were perfectly dry. We walked right across them, and could see to either end of them. They formed no channel at all; simply little holes in the ground.

Q—That profile includes the detour of the pond?

283 A—Yes, sir. The reason that this profile going west seems to indicate a falling of the country generally to the west, is easily explained. That line through there on which these levels were taken does not run at right angles with the direction of the valley. It ran diagonally down the valley, not at right angles to the general course of the valley. I mean by the valley the general body of swamp land—the entire body of swamp land. I made another cross section of that body of swamp land, further up the slough, the day after I made this.

Q—Whereabouts did you make that the day after?

284 A--Beginning at the corner of Section 27, 28, 33 and 34, in Township 29 south, Range 24 east, and running south 16 deg. west towards a point on the mountains; a well marked point, that was used for a foresight. That would be the southeast corner of 28. We ran south 16 deg. west in a straight line, until we came to overflowed land, which prevented our going any further with the team and outfit, and crossed this. We made a profile of this. It is on Exhibit L, next below the one I have been testifying to. That also runs from east to west. On the profile east is the left. It is shaded with green. It is marked "profile of
285 "Swamp Land District 121, through Sections 33 and "4 and 9, Range 23 east, Township 29 and 30 south." I made notes of the levelling. I have them with me, and this profile is made from those notes. It is correct. I assisted in making it, and it is correct. And these notes are correct. I cannot remember what they are without looking at them.

Q--Read the notes if you please.

A--I did not make my answer to the first question quite complete as I intended to. I said we ran in a direction south, 16 deg. west, as far as we could with our wagon and outfit, until we struck a long stretch of
286 overflowed land. We could not get through to measure the distances with any accuracy, without having the route cleared. It was all grown up with tules and overflowed with water. From there we took the elevation of the water surface, and waded through the tules and water to the other side, and resumed our levels on the west side on the water surface, on this side, and continued due south, along the west line, of Section 9, until we came to the levee of the Kern Valley Water Company's Canal. We started from the S. E. corner of Section 28. The notes will not give the direction
287 we went. We went in a direction south 16 deg. west. That would not bring us to the corner but to the east of that corner, not far from where the line crosses the north line of Section 9. We could not measure our distances all of the way on account of the water. The tules were grown up very thick. When we struck the overflowed land we waded through after taking the elevation of the water surface and came to a fence on the west side of Section 9, and there we took the water surface again as the starting point, and continued the levels due south alongside of the fence to the levee of the Kern Valley Water Company's Canal. Our line

288 through the water was more or less irregular. I assumed my initial point at 100, the same as before, simply for convenience. The profile is made on the same scale as the other; but the two lines of levelling are entirely independent of each other; they have no connection except that I have assumed the same arbitrary initial point, "B. M. 100," at the surface besides the Section post; that is, on the ground.

Q—Before recess you were about starting to give these levels of this second profile, and the cross sections in this body of swamp land from the southeast corner of Sec. 28, T. 29 and R. 24, running southwesterly
289 across the body of swamp land north of Wible's Camp. Will you continue that and give those levels? You gave an initial point as 100. Starting from B. M. 100, please give it.

A—My levels began at the southeast corner of Section 28, as I stated before, at which point I drove a small peg to the level of the surface of the ground, and assumed that elevation as 100. At that station 100, then, we have

99.6	98.3	97.6	97.7
97.4	97.0	97.8	98.2
290 97.7	98.7	98.3	98.2
97.8	97.2,		

where I entered the tules for the first time. That is station 14. Outside of it was open tule ground, but no tules were growing.

97.3	97.3	97.5	97.2
97.6	97.0	97.1	97.1
97.0	97.1	97.3	96.9
97.3	96.5	97.4	96.9
96.6	96.8	96.3	96.3
96.4	96.3	96.1	96.2
95.9	96.2	96.0	96.6
291 96.0	96.9	97.0	97.1
97.1	97.7	97.1	97.3
97.5	97.5	97.4	98.0
97.6	98.4	97.9	98.1
97.8			

That takes me to the west bank of the unfinished ditch, and is Station 59. Water running a foot deep and four feet wide in the ditch. It seems to have been started for a much wider ditch than that, and a part of each side had been constructed, leaving the centre not taken out. This was the principal stream running

292 down one side, and was the only stream that amounted to anything.

98.2	98.5	98.6	98.5
99.4	100.2	100.9	98.6

bottom of a stagnant pond 78 feet wide, sloping banks, water five-tenths of a foot deep.

100.2	99.1	98.9	99.2
98.6	99.5	99.3	99.0
99.0	98.6	98.4	98.4
97.8	98.4	97.7	

overflow one to six inches, the water moving slowly northward. That was Station 82.

293

98.3	98.2	98.2	98.4
98.3	99.0	98.8	98.9
99.4	98.3.		

There I deflected to the right, but I could not state exactly how much from my course, to avoid a very dense growth of nettles and tules. We were not able to take our wagon out further, and myself and two others proceeded to cross the tules on foot. We deflected maybe 100 or 150 feet from our true line, and got back to it again very soon, got back on the same line again; probably deflected 15 or 20 deg.; a similar deflection further to the left to get back on our line. I went around

294 this clump of nettles and tules, and got back as soon as I could to the original line, and it was very close.

98.2, 98.2, 98.3, deflected back to the left, where I do not think it amounts to anything.

98.5	98 5	98.6	98.6
98.9	99.3	98.9	97.6

"in Buena Vista Slough." That point in a short bend in the end of the slough, not in the centre; and the elevation was 97.6—Station No. 103.

Mr. HAGGIN—Go on.

A—Station 104 is 98.6, 98.4; at the right bank, water

295 0.2 feet deep; 95.5, that is station 106; "bottom of slough near left bank, deepest water, 2.9 feet," without any material increase in distance; that is right up the bank, the west bank being nearly vertical. We have an elevation 99.5 at the point on the left bank, making the bank 4 feet higher than the bottom of the slough.

Then goes on the stations, 107—99.5, 98.6, 98.2, 97.7. "Water 0.2 of a foot deep;" 97.4, "water 0.6 deep;" 97.9, 98.1, 98.6, 97.8—"water, surface." That is overflowed land on the west side of the slough. That was station 114. From there we took no measurements for some distance across the slough—across

296 the marsh or overflow, as you choose to call it—owing to the depth of the water and the growth of the tules being so dense, being so difficult to get through that we simply fought our way as best we could until we came to the margin of the water on the west side, which was on the west line of Section 9, where there is a fence at that point.

We re-commenced our levels, taking the water surface at the same elevation as we had kept it on the east side of the overflow, and continued our levels southward along the fence, as follows. Station 1:

	98.1	98.0	98.3
297 98.3	98.4	97.7	98.1
98.3	98.7	98.8	99.2
98.8	99.2	99.2	99.4

That is the 15th station, running southward from where we assumed our levels along the fence, at the margin of the overflow; 30 feet further brought us to the corner of the fence, near the canal, at which point we took the elevation of the top of the post, which is 104.4. Then at station 16, 102.7: "Top of the bank of a small canal; a sort of auxilliary canal running alongside of the main canal, to the north;" 30 feet
298 further, bottom of a small canal, 98.2; "84 feet from the last station, top of bank of main canal, 106.6. Water surface in main canal, 98.1." That is all.

The profile at the extreme western end shows the canals and the levee that I speak of. Those two high peaks, as they seem to be are the summits of the banks of those two canals. The break in this profile is the space through which we passed without taking and measuring levels; except as we walked through the water and saw from time to time.

The COURT—What is the width of that sheet of water between those two points?

299 A—I estimated from half to three-quarters of a mile; probably three-quarters. At Station 14, we entered the tules. The slight irregularities that appear before we come to 14. was simply slight undulations of the ground as indicated by level notes. That was outside of the tules. There was no water channel there; or evidence of a water channel.

Q—At Station 59, you have mentioned the bank of a canal which you found?

[The witness marks the position of that canal on map L.]

A—That is Station 59. That is the same canal

300 that I testified to this morning about having gone to. That is the same canal that I followed last Sunday. [The witness marks Station 67 on profile L, and says:] That is rather a low depression between the two comparatively high points. That is the bottom of the pond of stagnant water or hole, I noted it at the time as being about 78 feet wide, with sloping banks, and the water .5 of a foot deep, stagnant. My impression is we walked right through it. It was slight. I walked around it instead of walking through. The station happened to come right in the centre, and we took it about where the station was. There was no inlet to it.

301 Q—What station was it you came to this portion of the slough, hole, or whatever it was, shown on the profile to be 11,000 feet from the initial point?

A—At Station 103, represented on the profile is a lower point than any preceding point in Buena Vista Slough. That is the point that came in the water near the right bank of the slough, not in the centre of the slough; but it was the best place we could get. We could not get a point at that particular station.

Q—What do you mean by the right bank?

A—In speaking of the right bank of a water-course it is always understood that we are passing down the

302 stream. In this case it would be the east bank.

Q—How wide was that slough at that point?

A—We did not cross the pond at exactly that point. It was simply a bend in the slough; and we just cut across the edge of it; and then our next elevation was up on the high ground; the usual ground surface still on the right bank of the slough.

Q—I see in this that there is a depression for nearly 500 feet on the profile. Do you mean that there was that width of a slough there—500 feet?

A—I mean that the point I estimated as being in

303 the slough was just in the water, in the edge of the slough some 10 or 12 feet from the bank there. Then the next points, that is 104 and 105, were higher up the bank, but still not quite as high as the general ground surface, the bank being quite a slope on the east side. Station 105 was at the edge of the water, where the water was .2 of a foot deep.

Q—From Station 103 to Station 104 in that 100 feet between those stations? Did you find any point of higher elevation than these you have mentioned between Stations 103 and 104?

A—No, sir; there is a difference of one foot about;

304 and no intervening points that vary materially between the two—one being low down in the water, and the other out of the water on the bank of the slough. Station 105, 98.4 was just at the edge of the water, and it was .2 of a foot deep. I do not mean that the slough was 500 feet wide there. I did not mean anything of the kind, but that the elevation of Station 103 is 97.6; there we happened to come to a little bend in the slough that we could cross—a little sort of a bay. We got across that, and took our point down in there for two reasons—we wanted to see how deep the water was, and for another reason, that on that bank would have
305 been considerably off our line and a very dense growth of nettles. As near as I can remember, the slough was 50 or 60 feet wide. The notes will show pretty nearly. No, sir; it is very nearly 100 feet wide where we crossed it; we crossed it a little diagonally. The slough would be about 60 feet wide. My notes show that Station 105 is at the edge of the water; but, going over 103 and 105, it goes diagonally across a little bend in the slough, and the next station strikes the high ground on the banks of the slough, on the same bank of the slough. Then our crossing of the main slough went from Station 105 to 106, being just
306 100 feet in the direction in which we crossed it. We crossed it at an oblique angle, but Station 106 was in the bottom of the slough, near the left bank. The deepest water was 2.9 feet, and the elevation at the bottom there being 95.9. Then, only a foot or two further we took a point on the west bank of the slough, the bank being quite abrupt, 99.5. The last elevation before that was 95.5, the bottom of the slough, and then 99.5, at the main bank, quite an abrupt bank on the west. We just struck that particular point in the slough by following our line. We struck it in our
307 direct line, and crossed it where we first met it. We had no prospect of any better crossing. After crossing the slough we had two stations of high ground until we reached Station 110, where the water was .2 of a foot deep. That was the east side of the overflow and on the east side of the slough. We went through that overflow and made soundings at two or three places along there. The deepest water we found was 1.4 feet.

Q—Was there any channel through there?

A—No, sir. There was that depth for a considerable portion of the distance across; no channel. I

308 kept through the tules all of the time. There were occasional high points that we crossed, and we kept out of the water whenever we could, if it was in a direct line. We found there no water deeper than 1.4 feet. After getting out of this body of water, we went thence in a southerly course along the fence on the west line of Section 9, sixteen stations to the Kern Valley Water Company's canal. I came to no channel after leaving this overflow.

Q—There is another profile on this Map L; do you know anything about that?

A—Yes, sir; that was made from my notes, under
309 my directions. I assisted in making it. That is the cross section of the swamp and overflowed land, between Kern and Buena Vista Lakes, on the range line between Ranges 26 and 27. The notes of that cross section are correct, and it is correctly represented on this profile, the lower line marked with red.

Q—There is a break in the profile. What is that?

A—The channel of the main slough connecting Kern and Buena Vista Lakes. The levelling was done on the 2nd and 3rd of this month, of May; on the same occasion that I have testified to a few days since.

Q—Do you know anything about the Calloway Canal?

310 A—I know a little something about it. I have seen it; I first knew the Calloway Canal 1875. The only thing I recollect distinctly was from my observations in seeing work in progress there. The only date that I can fix definitely was in December; I think the 3rd of December. I was doing work over there, running some section lines; subdividing some sections for some settlers. I mean across the river, near the Calloway Canal. I saw Mr. Calloway there. I understood him to be in charge of the work. He had quite a number of men and teams at work. I don't know who they were. They were excavating for the canal; constructing the
311 canal. I cannot recall any other dates that I knew anything about at all until I took charge of the canal in the fall of 1878. I took charge of this construction in October, 1878. I continued the location of the canal from where I took it up to the northwest, and cross-sectioned it; and had general charge of the construction. When I took it up it was about at the end of the nineteenth mile from where it leaves Kern River Slough, not far from Section 11, T. 28, R. 25, somewhere on that section which was the point at which I took up the work. That was in October, 1878. I

312 continued to work on the canal until its completion; in fact, until the present time. I am not quite through yet. There is still more or less work going on. From Section 11 we constructed the main canal to Poso Creek, and about three-quarters of a mile across it, and we built some sixty or a hundred miles of branch ditches and canals, radiating from the Calloway. That comes pretty near telling the whole story, as far as it goes. We continued the construction of the main canal to Poso Creek, where we put in a timber structure for a waste-gate or a weir, and carried the water across the creek; put a service waste-gate in,
313 because we wanted to run the water down the creek; continued the construction of the canal about three-quarters of a mile on the other side of Poso Creek, to accommodate some ranchers there. We built lateral ditches running westward from the canal, and I have been engaged in such construction ever since. That is a part of the system of the Calloway Canal. The size and width of the canal when I took charge of it was 80 feet, with a slope of four feet, about. The banks were five feet high, with a view to carrying four feet of water. It was not the intention to carry more than four feet of water, I think. We continued it the
314 same size to Poso Creek. There is a portion on the north side of the creek which is 60 feet wide, and not 80, on the north side of the creek; otherwise it is the same. We ran a canal across the stream. We constructed a weir connecting the earth bank on the south side of the creek with that on the north side of the creek, and then continued on along the bank of the creek until it struck the point where the original ground surface was as high as the top of the bank of the canal, and this converted a portion of the creek into a pond; at the same time to hold the most of the
315 water of the creek when it comes down, and make use of those waters for irrigating ground on both sides of the creek. The same thing was done on the north side of the creek, in connection with the banks of the canal on that side. There was water in the canal when I took charge of it in 1878. It was down pretty nearly to where the construction force were at work. We were in the habit of damming the canal just as far ahead as the work was completed, to have the water down for the accommodation of the stock; and as an additional section of the canal was completed, half a mile or a mile, we would cut out the dam and build a

316 new dam down to the end of the construction. In that way the water was kept along pretty close to the work. The soil we built through was mostly sandy loam. Occasionally we struck a layer of very hard clay or hard pan quite near the surface. I am still at work on the canal, either the canal or branches or ditches. There is always more or less work going on. From the time I took charge of it in 1878, work has been going on all of the time, more or less. The force at work on it was variable. There was a time when I had 90 to 100 men. There have been times when I had not more than 30 or 40, and at
317 times perhaps less than that.

Cross-examination of

T. R. FILLEBROWN.

To Mr. HOUGHTON—I took charge of the work on the Calloway Canal in October, 1878. It was then completed to Section 11, about 19 miles. That was about 19 miles from where the canal leaves the slough. It follows the channel of the slough for about three
318 miles.

[The witness was asked to look at Map No. 4, to see if the canal is correctly delineated on that map].

The WITNESS—It is substantially correct, sir. The entire length of the canal now is $30\frac{3}{4}$ miles of canal, just about thirty miles to the creek. That would be $11\frac{3}{4}$ miles constructed since October, 1878, of the main canal. I cannot remember with any certainty just how far the canal was constructed by the 1st of January, 1879. I don't remember how large a force I had on the canal when I first commenced on it; during the first two months I had a pretty good force. The work
319 was being done under contract, and I did not have the men to take charge of it. The contractor was Mr. Broad. By the 12th May, 1879, it was completed very nearly to the creek, I think, perhaps quite. In the seven months we had made about eleven miles of canal, as near as I can remember. I cannot say definitely where it was at any particular time. I cannot tell what portion of the 60 or 100 miles of branch canals have been constructed during the past two years; probably more than half. The weir, or dam, was thrown across Poso Creek in the fall of 1879, or winter. I am still at work on that canal, more or less; on the main canal or its

320 branches. It was 80 feet wide on the bottom where I commenced to construct it, and I have continued it at that width to Poso Creek. I don't know the width of that canal from the slough to where I took it up. It was designed to be 80 feet. There are points where it is less than that; I cannot state how much less than that. I know that for some little distance it runs over a hard pan country, and we were in a hurry to get it through, and dug it out somewhat narrower than originally intended, and let the water cut out the balance, and it is deeper there, that is, it is cut out below the grade. It is not out to the full width; I cannot
321 state how much it lacks. I think the head-gate is 80 feet, where it is taken out of the slough, but I am not sure. I think it is 80 feet wide for some distance after you pass the head-gate, but I am not sure.

Q—Isn't there a point where it is 60 feet wide on the bottom, and after that, for some little distance, only 40 feet wide?

A—I don't know; I never measured it.

Q—What is the capacity of that canal; what grade is it on?

A—At the upper end it has a grade of .8 of a foot;
322 at the mile, down to little above where I first took charge of it. The grade was changed to a foot to the mile, and it continues on that grade to the end.

Q—What water does that canal carry when it is running four feet—that you say it can carry?

A—I have calculated—I don't remember exactly—it is 500 or 600 cubic feet per second when it is running to its full capacity, or four feet. When I was down on Buena Vista Slough last Saturday, I followed along on the north side of the main levee of the Kern Valley Water Co. to a point where the water runs through a weir and into the slough, and then followed that
323 slough down. I followed it there along the slough, or along the overflowed ground, down to the Willows on Weed Island, but not on the slough all of the way. I was on the east side of it all of the time; did not cross it at all. The slough was 40 or 50 feet wide where it was taking water from the weir, I guess. I don't know how deep the water was right there at the gate. I did not measure it. I did not measure the water along there, at any point between that point at the Norton House and the slough. It is difficult to state the average width of the slough from the weir down to Norton's or Crocker's, it is so variable. It varies

all of the way from 35 to 60 or 65 feet, perhaps. It is very irregular in its width. In following down there I did not keep on the slough all the way.

Q—Did you measure the depth at any point on the slough down there on Sunday?

A—No, sir; I did not.

Q—Did you measure the depth of the slough at any point?

A—No, sir; I followed the slough down to the Willows. I cannot locate the Willows positively. I think they are located at that sharp bend in the slough on the southeast corner of Section 32; but I am not perfectly sure as to that. I never made any careful survey of that country. The artificial channel which I found down there was at a distance of 300 or 400 yards to the eastward of the Willows, I think.

Q—Then the cut that is there on map D, would not represent the channel that you found there?

A—No, sir. I don't think it would, if the willows are located where I think they are. The channel was east of the willows some 200 or 300 yards.

Q—In regard to this first level that you ran across, commencing, as I understand you about a mile and a quarter south, from the 7th standard line; how did you fix your starting point?

A—I was unable to determine the exact location of the starting point, until I connected with a known point on the west side of the slough, I had no point reliable on the east side. I took my directions and distance, and then I got on to the west side. There I connected with a stake which I knew to be the centre of Section 12; then I calculated and platted my notes backward. I took no fixed Government corner to start from. We came out 16 chains to the north-east of the centre of section 12. Not due north-east, but the direction I have stated in my notes; between a quarter and half a mile north of the centre. We started in the east and ran to the west.

Q—I understand you to say that you fixed your levels at every 100 feet?

A—Yes, sir.

Q—Have you in your notes anything to show the condition of the country between those points?

A—I have two explanatory notes there, which I referred to this morning.

Q—Is that all?

A—That is all. That, is in addition to the stagnant

328 pond, that I ran around, there are two little gullies that I crossed, but they happened to come midway, or between stations; and the rodman did not take the elevation of the bottom of these places; but I noted them as I walked over them, examined the ground both north and south, to see that they were not of any consequence. They were little depressions perhaps a foot deep; little holes or gullies in the ground, and I followed them far enough both north and south to see that they ran out entirely in the course of 200 or 300 feet. The profile only shows the direct line from one point to the other point, being 100 feet apart.

329 Q—It don't pretend to follow the ground between the points?

A—It is always understood, however, that if there was any material undulations in the ground between stations that they are to be noted; and we always do so. Only material changes are noted. A material change I should consider any that would have any effect in constructing earthworks if we were doing anything of that kind, or anything that would make any sort of a showing as to the lay of the country.

Q—If you were running that line for the purpose of building a railroad or earthwork, would you in your

330 notes show everything that existed there where there was any change between the 100-foot points?

A—I would not note anything that I saw on that line unless it was the pond I speak of that I gave you the notes of.

Q—That you omitted to note?

A—I omitted to note the exact depth of that, because it was disagreeable to get into the water there to take the bottom. I saw by running around it, that I could keep the same elevation.

Q—Well, the very purpose for which you went there was to find out whether there was any water there or

331 not?

A—The purpose for which I went there was to find out whether there was a continuous channel, and I satisfied myself better by going around the end of it that there was not, than was possible by going through it. However deep it may have been, it would not prove that it was a continuous channel if it ended in 300 or 400 feet. When I did find the water, and something that looked like a channel, I did not measure the depth of it. I estimated it to be about one foot deep. I could not see the bottom of it; it was very muddy. I

332 could make an estimate by the slope of the banks. The bank was very steep on one side and very sloping on the other, and the water was not more than 20 or 30 feet wide on the surface. I could not make a very great mistake as to its depth. Twenty feet would not make any difference. I could not have made a mistake of 20 feet, though, because it was simply impossible from the nature of things for that hole to be so deep; though, if any one should testify that it was 20 feet deep, I would not contradict him. Had there been any point along that line between the 100-feet points where there was a depression of two feet, 50 or
333 60 feet wide, I certainly should have noticed it; and I came to nothing of that kind. I came to no depression between those 100-feet stations, where there was a depression 50 feet wide, that had a depth at the greatest place of 2 or $1\frac{3}{4}$ feet. The depression that I came to commenced at Station 113, if I remember right; then 114 was still lower; 115 was across on the west bank. I find Station 110, on this Profile L, to be 93.5, and the next 93.6, and the next one 93.6; that would be Station 112. 113 is 93.9; 114 is 93.8; 115 is across the slough. 114 was, as near as I can remember, within 30 or 40 feet of the water. I did not make a
334 careful note; I made no memorandum as to how far it was from the water.

Q—What did you find, if anything, to your right, or to the north, for a quarter of a mile, preceding the time that you have reached the edge of that slough?

A—A quarter of a mile north of the line that I was on?

Q—No, sir; for the last quarter of a mile which you traveled before reaching the east side of that slough to the north of the line?

A—I didn't go north of it at all; I didn't travel north
335 of it; I kept right on the line.

Q—Did you notice the slough or channel to the north of that line running right along parallel with it within a quarter of a mile of that point?

A—No, sir, I did not. The line was considerably grown up with tules, and I could see that far only at a very narrow point, where there was an opening or elevation of the ground. We walked through those tules.

Q—How could you see through them?

A—We drove the wagon ahead of us, dragging a log behind it, and a man standing on the log, and broke them down.

336 Q—Then they were broken down all of the way through?

A—Yes, sir; the tules were taller than myself; a good deal taller than myself; 10 or 12 feet high. When we came to this pond, as I call it, we drove around it; the south end. The tules were all around it, just as dense and high all around it, as at any point, for all that I could see. They were all of the way from 10 to 12 feet high around the pond. We drove through them in going around; drove through the tules all the way. I went around with the wagon, and set up the level at a favorable point in close to the margin of the pond,
337 where I could see the rodman when he passed all of the way around. The tules came close to the water; close to the margin of the lake. There would be 12 or 15 feet in places bare between the margin of the lakes and the tules. We then continued on to the west. I did not go around the north end of the pond; but one of the men drove around there a little ways, far enough to satisfy himself that it was the quickest and shortest way to go around that end; and we took the shortest end.

Q—Who was it that drove around there?

338 A—Charles Jackson, I don't know how far he did drive; I did not myself go that way around.

Q—Can you tell from that plat how far that pond was from the point you started from?

A—About 11,500 feet. I don't know how far it is from the canal, on the west; I did not measure the distance to the canal.

Q—How far is it from the centre of Section 12?

A—I can tell by my notes. [Referring to notes.] About 10,000 feet, very nearly. Very nearly midway, 10,500 and some odd feet. I did not go to the south of that pond, only to drive around the margin. And
339 after I drove around the rodman walked around to give me the points on the bank. This line was run directly across the swamp land, except the detour that I made around the pond, but not at right angles. The terminal point on the west side was 9 feet lower than the initial point. We did not go at right angles across it, for the reason that we could not get so easy a route through the tules in that direction as the other way. We had a good objective point on the other side, and we knew pretty nearly where there was a section corner on that side that we could connect with, and it seemed to present the most favorable route for getting

340 through with the least work in the way of breaking down tules.

Q—Would there be any trouble in crossing that body of swamp land for five or six miles, or three or four miles north or south of where you were going in almost any direction?

A—I don't know. I never prospected it at any other points.

Q—Who selected that point that you started from?

A—Myself and others. Nobody told me that point in particular. Mr. McMurdo, and Dixon and Jackson, and a young Spaniard were with me.

341 Q—Was it not indicated to you before you left, to go down there and that that was the route which you were to take to cross those sections?

A—No, sir, it was not. We were to exercise our own judgment when we got there.

Q—You had no reason for starting at that particular point?

A—Except that it appeared to present a favorable point for crossing it. That is all.

Q—I understand that in going across, you simply kept on that line within the high tules, neither going to the right nor to the left?

342 A—Kept as straight as we could. It took us one day to make the crossing and run those levels on that line. There was nine feet difference in the elevation, between the point where we started and where we came out. We came out on high land, or pretty high land on the west side. The point where we started was fairly up above the tules. We took it as a convenient point, because a man who was there, seemed to think it was where a section post had stood. He pointed out the spot as near as he could, where he had seen a section post, but it was gone. (Map No. 2 is shown the witness, and he

343 states:) As near as I can determine, that correctly represents the body of swamp land that we passed through. I am not sure about the segregating line being correctly represented. We started from about the center of Section 11, and came out near the center of Section 12, in a due westerly course. If we had gone across the swamp land, the nearest way we could have gone, we would have gone nearly southwest, and would have come out about three miles further northeast, that is, further up the slough than we did. The second level that we ran across there, we started in the southeast corner of Sec. 28, T. 29, R. 24, and that course was south 16 degrees west,

344 kept on that course for 9,200 feet as near as we could, following a straight line. At Station 59, we found the levee which I referred to in my Saturday's testimony. That was 4,400 feet from where I first struck the slough. We struck that first at Station 103, 44 stations, 4,400 feet. At Station No. 82, we came to running water, moving very slowly, running north. It must have been overflow from the slough, I suppose, further up the stream—further south.

Q—Do you know whether it came from the overflow,
345 or from the east channel of that canal?

A—I could not state definitely, because I did not follow it up to its source. It may have come from either. At Station 92, we were deflected some distance to the right. We went about three stations to the right, and then went a corresponding distance to the left, on about the same angle. The point where I left my course and where I came back to it, would be some six or seven stations apart, on a direct line. I know nothing about the conntry between those two points, only there is a dense swamp of tules, and overflowed with water. I have no special note at 102. The elevation at station 102, is 98.9; at 103, 97.6; this is the second level.

346 Q—What did you find there?

A—That was in the side of the slough, probably 10 or 12 feet, perhaps 15, more or less. I am not positive of the distance to the bank. I did not note the depth of the water there. The rod man was some distance from me As I walked through it, it was about one foot deep, but I made no note of it. I did not cross the slough at that point. The next station was on the same side of the slough.

Q—In running that station, how did you measure the distance between the two?

A—Simply by pacing it. The rod man paced it as near
347 as he could through the water. He went directly from one station to the other. The water was perhaps a foot deep, and from that to nothing. He kept right along by the side of the slough, as close as he could keep—as near a straight line as he could. 105 came just in the edge of the water, where it was two-tenths of a foot deep, still on the east side of the slough. I crossed the slough at that point. The deepest water in the slough, was 2.9 feet. I measured that. On our line, it was 100 feet, as near as we could pace the distance. The water was running there; some current, but not a very rapid current;

348 quite sluggish in fact. The banks were about one and a half feet; no, sir, about one foot. The right bank was just about one foot above the water. That is, left bank, the west bank. I made no note of it, not in those words, but the level notes themselves show it. The bottom of the slough was 95.5, water 2.9 deep. That would make the surface of the water 98.4; the top of the bank 99.5; making a difference of 1.1.

Q—What kind of banks were there on the slough at that point?

A—The western, or left bank, was quite a solid, well defined bank. The right bank was a more gradual slope.
349 It was not so well defined. The water was not overflowing the banks at that point where we crossed; but there was overflowed ground which we crossed just before we reached the slough. After crossing the slough we kept on the same course south 16 deg. west, as near as we could. We did not set an instrument through those tules, but we took a very distinct, plain mark on the montains, to the southwest of it, which we could see all the time. We did not run a direct course through; not after we reached the point I speak of, because we could not get our team through; the tules were very high there.

350 Q—How could you see anything through those tules if they were 10 or 12 feet high?

A—By breaking down the tules a little in front of you, you can see a long way, if your objective point is high enough to see over the tops of them; we followed on in that way. Here and there we saw islands sticking out of the water, that had no tules growing upon them. We were not running by the instrument in going through there not after taking our observations. We put up our instruments and ran by foresight.

Q—How far did you continue on that line?

A—The first point that I noted that I made a deflec-
351 tion was at Station 92. Then we came back into the line again as soon as possible. But in going through the dense tules and overflowed ground, after ceasing to take levels, my route was more or less devious through the tules, and I did not follow any regular course until I got to the dry ground on the opposite side. Then I knew where I was, and on a connected track. The first water that we came to on the east side of the slough—the first moving water; overflow, one to six inches, was at Station 82 about; that was very slowly moving north. After crossing Buena Vista Slough, the first water was at Station 110, where it

352 was two-tenths feet deep, and at Station 111, it was six-tenths feet deep. I continued to level a little further because the overflow was but slight there. I continued levels until where I came to where the tules were much more dense and difficult to get through, and the water growing deeper. That was at Station 114. At Station 114, came right to the edge of the water. After we had passed this first little body of water, and we ran over the little island about one foot high, entirely surrounded by water and tules as well. The water was moving very slowly to the northwest. At 114 was where I last took the elevation
353 of the water surface on the east side of the overflow. Then I waded through, keeping as straight a line as I could until I reached the margin of the water on the left side, and there I resumed my levels, assuming that the water was the same elevation on the west side, as on the east side, it being a continuous sheet of water. In going across there through the water, we did not select islands to cross on. It was just as easy to go across at one point as another. If an island came in our way, we crossed it. We kept in a direct line as nearly as we could under the circumstances. We did not deviate from the direct line for the purpose of striking these high points. Kept as
354 straight a line as we could, going through the water or high ground, as the case might be. The difference in elevation between the point where we started on Section 28, and the water surface where we came out on the other side, was 2.2 feet. We had gone south 16 degrees west, a trifle over two miles. That was very nearly at right angles to the slough; a trifle up the slough, if anything. I struck the line of Section 9, 1,600 feet from the bank of a small canal. The difference in the elevations of that 1,600 feet, was 1.6 feet; the point taken next to the canal is 1.6 higher than the water surface. That is a little less than a third of a mile.

355 Q—Had you continued in a straight line, or in the line you took, how far would you have had to have gone before you would have struck the west line of Section 9?

A—We would have struck it very near the middle of the section.

Q—Wouldn't you have struck it nearer the south side than the middle?

A—No, sir; I think not. We would have struck just about the southwest corner, nearly.

Q—You would have struck that exactly, wouldn't you?

356 A—Yes, sir.

Q—What difference would it have made, in taking a difference of one degree?

A—We would have struck somewhere south of the quarter section corner on the west line of Section 9. In making this third line of levels, shown upon this 3d profile on Exhibit L. I commenced upon high water mark on the range line between 26 and 27. as shown on map I, represented by a green shaded line. The difference in elevation between high water mark and the corner of Township 31, Range 27, as shown by that profile, is about 9 feet; and about a mile north of that, a difference of 2
357 feet. The difference between the elevation of high water mark and the north bank of the connecting slough, is about five feet. The slough at that point was about 16 feet deep; a little over 15, below the north bank, which is higher than the south bank. The bottom of the slough would be about twenty feet below high water mark. The summit of this bank is nearly five feet below the high water mark. In fact there is intervening ground between it and high water mark, which is four feet lower. I don't know what the area of Kern and Buena Vista Lakes is within the tule line. If I have made the computation, I
358 have forgotten it.

Q—As you have represented Kern Lake upon the map "I" there, what would be its area within the water line?

Mr. GARBER. Q—What does that represent?

A—It represents clear water within the tules, as near as we were able to determine it, from such scattering information as we could obtain. I don't know anything about that. Kern Lake contains about twelve sections, that is, making a rough calculation. That is a close approximation. Buena Vista Lake covers between 20 and 21 sections. When I ran that line of levels across the slough, between the lakes, Mr. Williams, Mr. McFarland, and
359 William Craig were with me. And when I ran the other two levels, Mr. Jackson, the two Dixons, and Mr. McMurdo were with me.

Re-direct Examination of

T. R. FILLEBROWN.

Q—I understood you to say, when you were asked the area of these lakes, that you did not know what the area of these lakes was?

A—I don't know anything about it. He asked me to

360 give the area approximately, as represented on that map, and I did so.

Q—And you don't know whether they are correctly represented on that map I or not?

A—I do not. Map 2 is not a correct representation of the sloughs through that swamp land. I did not intend to be so understood. I believe it to be a correct representation of the segregating line on both sides of the exterior boundaries of the swamp land. I do not believe it to be a correct representation of the water courses, and I had no reference to that.

361 Mr. HAGGIN. Q—You have used the word "slough" a number of times. In some places you speak about going up and down and across a slough. What meaning do you attach to the word "slough?" Do you mean the channel, or what is dug out there as a channel, or the whole body of swamp land?

A—That whole body of land constitutes the swamp as I understand it, and down to a certain point. There is a water course different from the other courses.

Q—The only reason I asked the question was, that there should be no misunderstanding in the reporter's notes. You have used "slough," sometimes referring to

362 the whole tract of land?

Mr. HOUGHTON—Ask him what he means.

Mr. HAGGIN. Q—What reason did you have when you said for instance—I will give you what you said—

A—(Interrupting.) Speaking of that country down there, we have always understood that if we were going towards Tulare Lake, we were going down the slough, and if we were going southward, we were going up the slough. If we were three or four miles back from the slough, down the swamp land, going in that direction, we would say we were going down the slough.

Q—In using those terms, did you have in your mind at

363 the time any particular channel?

A—I don't know anything about the existence of any channel there except as I have found it at points where I have crossed it. Where I have made the lower cross-section, down near Dover's camp, I found no channel that I could call a water channel. But still, if I was going in that direction, I would say that I was going down the slough, because it is a convenient term, and one that everybody understands.

Q—Simply a term that you have agreed to use, without attaching any particular meaning to it?

364 A—Yes, sir. If there had be n no water there for years, yet, with the understanding that that way was down and the other way was up, we would say so. At the point where I found the water down there, in running the second profile, that was 2.9 deep and a certain width. It was not that depth all of the way. It had a gradual slope from the eastern bank the right bank, where the water was in it, as being only two-tenths feet deep entirely across, to a point very close to the left bank, where it was 2.9 deep; and that western bank was very steep. And our next point was taken up on top of the bank, within a few feet of the point on the bottom.

365 To the COURT—That distance was three-quarters of a mile wide; very nearly three-quarters. Every time that I have been at the head-gate of the East Side Canal the gate has been closed. There has been a little water standing in the canal below the gate, but perfectly dead water; none flowing from the gate, except what trickled through the cracks in the boards, and that was the state of the case when I did this work across the canal. The water that I saw spread out over this swamp could not have come from the East Side Canal, except as it came into the canal from the overflow of the slough, striking

366 the banks of the ditch and breaking them, and then flowing down it. In answering Mr. Houghton's question as to where I would have come out in making the crossing through Section 9 to Sections 10, 9, 7, 8 and 6, in Township 29, Range 23, had I made a crossing at right angles with the body of the swamp land, I made an estimate with my eye, and I could see a distance across, and I think the line would be about two and a half miles from the point where I did go out.

Q—Do you know that is where you would go out, of your own knowledge?

367 A—No, sir; only in a general way. That is a mere approximation; that would be about there. In making the second crossing, from the southeast corner of Section 28, in going south, 16° west, if I continued on that course I don't know where I would come out. I don't know anything about where the corner posts or section lines are on the ground itself down here, I did not make the survey myself.

Re-Cross-Examination of

T. R. FILLEBROWN.

Q—Why did you select a course south, 16° west, in making that last trip?

368 A—The same reason that we selected a due west course on the other line—that it happened to strike a very prominent, well defined point on the mountains, which we could keep in view without any danger of losing it; and we did not want to be to the trouble of setting up the instruments and making levels on through the tules. We had one very well defined point we could follow, and we followed it.

Q—How far, in going across on that line from 28, going south 16 deg. west, did you come from the willows which were on the slough you have spoken of?

A—A long distance above that. That is to the south
369 of it; so far that I did not observe them at all on that day.

Q—When you speak of your Saturday's trip, of going down the levee, and then, after going down the levee sometime, coming to Buena Vista slough, and then from that slough down to the willows, do you mean that in that connection you followed the swamp land, or that you followed the water channel?

A—In the first place, I have not referred to any trip on Saturday. It was Sunday; but I do not really mean either one.

370 Q—You didn't mean to say—

A—(Interrupting.) I did not mean that I followed exactly the channel of the slough or the margin of the swamp land.

Q—You referred to something that you styled a slough, as following close to it?

A—Yes, sir.

Q—Opposite counsel seem to make it appear that every time you refer to a slough there, you refer to the whole body of swamp land. I want to know if, when you said that on Sunday you went down along the west side of the levee, and came to the slough, and followed that
371 slough, or along on that slough until you came to the willows, what did you mean by slough?

A—When I said "slough," I meant the slough. That is that all along through there, the slough has a channel which is well defined along there by the Crocker place; and I followed close to the banks of that channel in places, but in other places I departed from it a considerable distance, in order to cut off these long bends referred to, and finally struck this levee, and followed that because it was easier travelling, and I could see the country

372 better from that levee than in the tules, which were there, all along down there, between this levee and the channel.

Q—When you started on this leveling trip across from Section 28, and say that you came to Buena Vista Slough, what do you mean?

A—I mean that I came to this same slough that I referred to, that was up to the Crocker place. I never made an actual survey of the tule line around Kern and Buena Vista Lakes, but I am familiar with the lakes, and have been around the margin, but not among the tules
373 or in the open water.

Re-direct Examination of

T. R. FILLEBROWN.

Mr. HAGGIN. Q—You spoke of going to a slough. I understood you in your testimony all the time, to be referring to what is described on map "D," and marked "Buena Vista Slough?"

A—Yes, sir.

Q—Do you know anything about Buena Vista Slough, independent of that mark on Exhibit D, yourself?

374 A—If I was to come to it in a strange country, I would not know the name of it as Buena Vista Slough. At the time I made these cross sections and run those levels, I did not notice the amount of water that was flowing through the waste gate at Wible's Headquarters; not on that particular day. There was no water where I made the lower cross section. It was perfectly dry, and clear across, with the exception of that stagnant pond which I have referred to. I approached that from the east and left it on the west bank, going still westward. There was no channel from that pond, either from the east or the west. None from the south that I could see or detect.
375 And I drove across there dry shod. It was grown up with tules all across the south end. I could not find a depression anywhere around that pond. No depression to the south end of the pond.

Q—What do you mean by depression? Do you mean any portion of the land which you were going over where it was a little lower than the balance of it?

A—Not so as to attract my attention, or to be discernible by the eye; any material depression I observed and took note of.

376 (The witness is asked to locate this pond on Exhibit D, and he does so and marks the location with a pencil, and says:)

It is somewhere in there on Section 8, probably somewhere near there.

Mr. HOUGHTON. Q—On what part of Section 8?

A—Probably on the east half. In going around this pond, I did not go to the north end of it at all; simply went around the south end of it. That is all. I don't know whether the channel ran to the north of it, or not any further than what Mr. Jackson told me. The water
377 was not running from that pond, it was perfectly still, dead water. It would make no difference as a practical fact, whether it had any channel north of it or not, as it had no inlet.

WEDNESDAY, May 18, 1881.

G. W. PARISH.

A witness called for defendant, duly sworn, testified
378 as follows:

Mr. FLOURNOY—Q—Where do you reside?

A—I reside about eight miles from this place, one mile west of the Belleview ranch, on New River; I have resided in this county seven years. I know the Parish & Wilson ditch. It is the same as is now called the Wilson ditch. I have had an interest in that ditch and have it yet. Mr. Wilson is interested with me in the ditch.

Q—Do you know whether there was ever any notice of appropriation of the water of that ditch posted?

A—Yes, sir.

379 Mr. HOUGHTON—One moment. We object to anything in regard to the Parish & Wilson ditch, or the Wilson ditch, on the ground that it is irrelevant and immaterial, and on the further ground that it is not admissible under the pleadings.

The COURT—The same objection was taken once before.

Mr. MCALLISTER—And also the further objection that it is not admissible against us as riparian proprietors.

Mr. HOUGHTON—That is understood. These are additional objections.

380 The COURT—The objection is overruled.

Mr. HOUGHTON—Exceptions on behalf of plaintiff.

Mr. FLOURNOY—Q—Do you know about any notice, remember anything about it?

A—I do; I and Wilson put up a notice for eight feet. As near as I can recollect, that was about August, 1874. We posted it at about one quarter of a mile below the New River bridge. We afterwards changed our ditch and changed our head-gate about one quarter of a mile higher; changed it in the Spring of 1875.

Q—Was the ditch constructed?

A—Yes, sir; we were at work. We did not finish
381 the lower end of the ditch, that is the lower channel of the ditch at that time.

Q—How long was it after the notice was posted, before you did the work?

A—There had been about a quarter of a mile built when I bought, and we went to work and continued right along until it was finished. The ditch was eight feet.

Q—Do you remember anything about the contents of that notice, the substance of it?

A—Well, yes, sir.

Q—What was it?

382 A—Well, we notified all persons that Wilson & Parish claimed eight feet of water for irrigating purposes, to irrigate on Sec. 2. This ditch was out of what we call New River, Kern River on the south side of it. This notice was posted where we made at that time our head-gate, at a quarter of a mile below the bridge, but we afterwards moved it as I said before; we commenced to use the water out of that ditch in the Spring, in March, 1875; water has been used there every year since, when there was water. In 1874, I had about thirty acres under irrigation; this ditch irrigates this year about eighty acres. I could not say what became of the notice.
383 I saw it about three weeks afterwards. I don't know what became of it. It was posted up on a board and the board was driven in the ground, the notice next to the river, facing the river, was put up with tacks.

Q—On paper?

A—Yes, sir. I have not seen it since; since that 3 weeks after I have not seen it. I rather think I would recognize a copy of it, if I were to see it. It was a short notice. Mr. Wilson signed it, and Mr. Wilson also had it recorded. I gave him the money, and he brought it in here, and had it recorded.

384 Q—Who else signed besides Wilson?

A—Wilson and my wife. I am unfortunate. I ain't very well educated. My wife does my writing.

Q—Did she sign her name to this paper?

A—She signed mine; she signed my name by my authority,

Q—Can you read writing?

A—No, sir; not to do any good.

Q—You mean, then, that if you would hear it read you could tell?

A—Yes, sir, I would.

Q—I wish you would repeat again what the contents
385 of that notice were, as near as you recollect fully?

A—Yes, sir. I, Mr. Wilson and Parish claimed 8 feet of water for irrigating purposes and farming purposes on the south side of Sec. 2.

Q—What township and range?

A—Township—Range 27 East. Our ditch came out above the Pioneer Bridge, at the present time; it has ever since 1875, say about 100, 300 feet. This Sec. 2 is west of the Pioneer Bridge; very nearly a mile west; not quite a mile. It lies on both sides of New River, for the river runs through it. I am on the south side of Sec. 2.

386

Cross-examination of

G. W. Parish.

Mr. Houghton—You say that you have had water from that ditch every year that there has been water down there?

A—Yes, sir. There have been one or two years that there has not been an ample supply of water, as much as we would like to have; and sometimes in the year there is not any water comes down.

387 Q—What years was it you failed to have water down there during the irrigating season?

A—Well, I have had water every season, during the irrigating season—every year. There has never been a year I have not had water in the irrigating season.

Q—Did you have plenty of water in 1879, during the irrigating season.

A—Yes, sir; I had water.

Q—Did all of the parties on that ditch have plenty of water during the irrigating season of 1879?

388 A—Yes, sir. The water did not come until rather late in the season; but we had plenty. I think it was along in May before we got plenty. We had water enough for stock along in May, if I am not mistaken.

Q—Why didn't you have water earlier than in May, 1879?

A—I think we had a scarcity of water down there sometimes.

Q—[Interrupting.] Was not there any water in the river before May, 1879?

A—Well, yes; there was water in the river up here, I suppose, at the other bridge.

389 Q—The water was taken out in the canals, above you, wasn't it?

A—Yes, sir; there was water taken out in all those canals.

Q—When you didn't have any?

A—Sir?

Q—Water taken out above in those larger canals when you didn't have any at all?

A—Yes, I had plenty of water.

Q—I mean previous to May, 1879?

A—Yes, sir; they were taking water out above.

Q—That ditch of yours runs right along parallel with

390 New River, don't it?

A—Yes, sir.

Q—And it is owned by farmers altogether?

A—Yes, sir.

Q—Two or three farmers?

A—Yes, sir.

FRED. STEINMAN,

A witness called for defendant, being duly sworn, testified as follows:

391 Mr. FLOURNOY—Q—Where do you live?

A—I live on the Calloway. I am a tenant of Haggin & Carr. I cant tell the section now—I believe Sec. 11. I don't recollect exactly. I have moved on a new place this year. I don't exactly recollect the section. I have been in Kern County, I think, about 8 years. I first went out on the north side in the fall of 1875.

Q—What did you do out there then?

A—I worked for Mr. Calloway on the Calloway Canal about 6 weeks.

Q—About 6 weeks in the fall of 1875?

392 A—Yes, sir; commencing in November.

Q—How long did you stay on the north side?

A—That time?

Q—Yes, sir; the first time when you moved out there?

A—Well, I staid right along on the north side—that is, I made the north side my home. In 1876, I was there every month one or twice. I had a pre-emption over there. I had to build a house. I called it my home while I was working on this side of the river to make a living. At times I didn't have any water there. In 1876, I was over there every month—once,
393 anyhow; sometimes twice, sometimes every week. I passed the Calloway Canal every time I went there, in the spring of 1876. I passed the Calloway, and passed where they were working.

Q—Who were working?

A—Mr. Calloway, in the early part of the spring, and in the summer it was Haggin & Carr. I don't know what time that changed, but I know that Calloway was working earlier in the spring, and in the summer it was Haggin & Carr. They were working every time I passed there. I never knew it to stop. In the summer, I was living there—no, not that year;
394 it was the next year I was living there.

Q—Speaking of 1876 now?

A—Yes, sir.

Q—Where were you in 1877?

A—In 1877—in the spring of 1877—I went over to the north side to live on my place; before that I was living down at Panama. I was sickly. I sold out my interest down there and moved over to live on my place. I moved over on to the north side in April, 1877. I think it was in April—March or April, I could not tell exactly which.

Q—To your place?

395 A—Yes, sir; in March or April. My place was on Sec. 4, Township 29, Range 27, about 2 miles, I think—about 2 miles above the Calloway. I lived there about 3 months. During those 3 months I saw the work carried on, on the Calloway, every day. I could see them right from my house. Not only that, but I passed by very often for recreation. I was kind of sickly at that time.

Q—After the 3 months were over, what did you do?

A—Then I moved over on to the island, making hay.

396 That is near town. I had a contract to make hay in Mr. Hudnut's field. I had a partner in with me. During that time I went over there—well, every week anyhow, I suppose—because a party was trying to jump my place, and I had to attend to it, and be over there very often.

Q—Then after you came over to the Hudnut place to gather hay, you still used to go, you say, every week back to your place?

A—Yes, sir.

Q—During the year 1877, the balance of the year, I say, the remainder of the year, whilst you were here,
397 you would go back to your place every week, you say?

A—Yes, sir.

Q—What would you see? Would you pass the Calloway canal when you would go back, each time?

A—Sometimes I passed the Calloway canal and sometimes I didn't; but I have seen their teams working on the Calloway, noticed their teams going over the work, and I have seen their camps. Sometimes I passed by there.

Q—Did you go back on to the north side then permanently to live?

A—About December, 1877, I went over to live as the
398 tenant of Haggin & Carr.

Q—What section did you stay on then?

A—On Sec. 1, I forget the township; it was right close by the Calloway Canal, say 150 yards from the Calloway Canal. From December, 1877, I lived there for 3 years, until December, 1880.

Q—Did you remain at home most of the time out there?

A—Yes, sir.

Q—What was going on with the Calloway during that time that you lived over there from December, 1877, until December, 1880?

399 A—They were working steady on the canal, a big force.

Q—How often did you see them during that time?

A—I have seen them every day, because I saw them right from my house. My house is on an elevated place, a high place, and I can see them for a long ways. I could see them 4 or 5 miles anyhow, not only that, I worked myself on it and had my teams on the work when I was not at work. I had to hire a team. I worked my team on the farm, plowing. Besides that, I

400 had to hire teams, one or two that I worked on the canal. I worked cleaning up the unfinished places right behind the canal teams. I have taken out dams they put in to hold the water back, that they would use to wetten up the hard pan. I had a contract to take them out, the hard, unfinished places. They left the canal unfinished in these places, say, for instance, 60 or 70 feet wide for some purpose, and I would finish them places. I finished up them places, taking out the banks where they were too wide.

Q—How was the water during that time in the canal? Was the water kept along in the canal?

401 A—No, sir. It was kept just for the purpose of wetting up the canal, to wetten up, just enough to wet up the hard pan, wet up the bottom of the canal so they could work and take it out, and for sheep.

Q—And for the sheep?

A—Yes, sir.

Q—You are speaking of down along where you were at work?

A—Yes, sir.

Q—You are living over in that neighborhood now?

A—Yes, sir. I moved on to a new place lately.

Q—How many crops have you had in there on the

402 north side and raised?

A—I have raised 4 crops; this is the fourth crop.

Cross-examination of

FRED. STEINMAN.

By Mr. HOUGHTON—Q—You say you raised four crops, and this is one; this year will make four.

A—Yes, sir.

Q—Then you have raised in 1881, what you call, this one, and in 1880 and 1879, and 1878.

403 A—1881, 1880, 1879 and 1878, yes, sir. In 1878 I had about 120 acres in on Sec. 1, west of the place I now own.

Q—Was there any water in the canal when you went there in 1877?

A—No, sir; there was not, no; there was no water running there because the canal was not that far advanced.

Q—How far was the canal from Sec. 1, when you went there in December, 1877?

A—There was water running in the canal, but not to

404 my place. I cannot tell how far the canal had been constructed in December, 1877. It was not quite constructed to my section. I think it was right close to it though. It was, I think, quite near to the line of that section. Some where, I could not tell exactly.

Q—How many tenants were there in 1878 taking water from the Calloway, between yourself and the river, the first year that you went there?

A—There was three. There was a man by the name of Smith, and a tenant by the name of Garner, and myself.

Q—That was all?

405 A—Well, I believe Sec. 19 was farmed that year by the Company.

Q Do you know how much land there was in between your place and the river that year 1878, how much land was irrigated between your place and the river?

A—I suppose a thousand acres or 1,200, something like that. Probably a thousand acres, more or less.

Q—Was there any irrigated beyond you that year, 1878?

A—Beyond me?

Q—Yes, sir; beyond your place.

A—One, yes, sir; one place. One tenant was beyond

406 my place, my neighbor.

Q—Who was that?

A—Mr. Smith.

Q—When you spoke of a thousand acres, more or less being irrigated, did you include Smith's land too?

A—Yes, sir; there was a thousand acres, more or less on the Calloway irrigated that year.

Q—When did you first see water in that canal?

A—I seen the water I believe, in 1875, when they first commenced on the canal.

Q—Where?

A—At the head, running right in the new bed of the

407 canal, through the cut. I could not tell how far it was running in that bed. It was running as far as they had built it. I guess as far as the canal was finished.

Q—You were on the canal you say, in December and November, 1875?

A—Well, let me see, it was 1875 that they commenced. That is in the fall. I seen it. I seen the water, yes, sir, it was that time that I seen the water.

Q—In '75?

A—In the new bed.

408 Q—When you went there in November, 1875, where were you at work?

A—In December, 1875?

Q—Yes, sir.

A—I worked on the Calloway canal at a place right opposite the place they called the Robb place, kind of west. I don't know just exactly the distance from the river. It is right a few hundred yards, may be probably, half a mile below the slough—that slough where they take out the water

Q—Then they hadn't constructed it half a mile from the slough, when you were at work there in November,
409 1875?

A—I could not tell where they commenced. I saw they had done a good deal of work before I came there. I could not tell where they commenced.

Q—When you went there how much of a cut was there?

A—There was a couple of parties had a contract there; that was finished, almost finished when I came, and Calloway had been at work quite a while, had done considerable work before I came there. I didn't take any notice how much there was done or how far they had advanced.

410 Q—You were working half a mile from the slough?

A—I think; I ain't certain whether it was half a mile or whether it was more or whether it was less.

Q—Then you were working a short distance from the slough or cut, were you?

A—It was not. It was a little cut where I was working; he was through with the deep cut.

Q—Was the canal finished up to the point where you were at work?

A—That I don't know, I never took any notice. I never went to see.

411 Q—You were on the canal within a short distance of the slough, say within half a mile, more or less, and you don't know whether it was finished from there to the slough or not?

A—No, sir.

Q—Was there any water running down to where you were at work?

A—Yes, sir, there was; once they turned in some water, they turned in water. It must have been finished—it must have been finished a good ways or they could not have turned in water.

412 Q—How far did you see the water running in the fall of 1875?

A—Well, I don't—I seen the water where they were at work. We had water on the bottom above where I was working. We put a dam across it to hold the water back. I suppose it was about 4—3 or 4 hundred yards above where we were at work.

Q—What did they have that water in the cut for?

A—That I don't know.

Q—They were not using it for irrigation?

A—No. They could not get it out of the cut; there was no land irrigated right there. They could not get
413 it out. I cannot tell when I first saw water running clear through the cut.

Q—You don't know?

A—It was in 1876 when I saw water running through there—

Q—[Interrupting] What did they do with that water running there in 1876?

A—Just only, I suppose, to wetten up the bottom of the canal. They didn't use it for farming purposes.

Q—Didn't they run it out on to the plains there, a large body of it?

A—That is in 1876? No, not that I know of. I don't
414 know what they did with it.

Q—Don't you know that they have run the water out of the west side of that canal and made a large pond down in the valley there? Didn't you ever see that?

A—No, I never saw any pond there.

Q—You never saw any water flowing out there from the west bank of the Calloway Canal and going down over the plains there?

A—Well, I saw water, but I supposed it was a break and was turned out for mending and stopping the break.

Q—Then you did see water running out on the side
415 of the canal?

A—I saw water out, but didn't see it running out. I didn't see any large pond out there. I was along there very often between 1875 and 1877.

Q—'75 and '76 you were there. You didn't see any pond at all?

A—No, sir; that is, I don't know that there was any pond or any water out there or not.

Q—You didn't see any?

A—I might have been past where it was, but I have never seen it.

416 Q—You say that Calloway was there in the Spring of 1876 at work, when, what time in the Spring?

A—Every month in the Spring of 1876.

Q—Well, what month?

A—Well, every month of that year.

Q—March, April and May?

A—I passed there every month at my place.

A—I asked what month it was you saw Calloway at work in 1876?

A—Mr. Calloway?

Q—Yes.

A—Calloway was at work there in January. I don't
417 know whether he was to work there in February. A part of February I think he was. After that I didn't take any more notice who was working, but I know the ditch teams was working on the canals, that there were teams working on the canals. I went past, I went to my place.

Q—You say that Haggin & Carr were there in the Summer of 1876, what months.

A—I know that they were there in the Summer, what months they commenced, I don't know. I could not tell you what months it was they worked on the canals, or their teams.

418 Q—You say in the Summer?

A—I could not tell exactly what months.

Q—Was it the first part of the Summer, or the last part of the Summer?

A—It was in the Summer, let me see now, I may recollect. No, I could not tell whether it was June or July or which month it was, I know they were working. I passed every month. I got acquainted with—I was acquainted with Mr. Taylor. I was acquainted with Mr. Barker. Mr. Barker was Superintendent or foreman. I could not tell when I first saw Mr. Barker there.

419 Q—Was it June or July? You say you don't know?

A—It was about that time, sometime. I could not tell exactly when it was. It was in the Summer, anyhow.

Q—How much of a force did Mr. Calloway have on that canal when you were there with him in November, 1875, how many men?

A—In 1875 I could not tell exactly how many men. I think he had 8 or 10.

Q—8 or 10 men. Did he have 8 or 10 men all the time that you were there?

420 A—Yes, sir, he increased the force.

Q—How wide is that canal where it runs by Section one?

A—I don't know whether it is 80 feet down there or 60 feet wide.

Q—There are some places where it is 80, and some places where it is 60, are there?

A—No, I think it is the same width all along there. I think it is the same width the whole length of it. I did not take any notice about that.

Q—And you cleaned it out and made it of a uniform width, you say?

421 A—Well, I didn't take any measure. I just took out the places that obstructed the water, where the banks were not finished. I don't know exactly the full width. I am now, and have been for years, a tenant of Haggin & Carr's.

Mr. FLOURNOY—Q—I understand you to say you don't know precisely when Haggin & Carr went over there to work.

A—No, sir: I dont know precisely.

F. B. MCCLUNG,

422 A witness called for defendant, duly sworn, testified as follows:

Mr. HAGGIN—Q—Col. McClung, do you reside in this county?

A—I do, sir; I have resided here since May, 1875.

Q—Do you know anything about that body of swamp land northwest of Bakersfield, some little distance south of Tulare Lake, between Buena Vista and Tulare Lake?

A—Yes, sir; I know something in regard to it. I have been on portions of that tract of swamp land. I was there last Sunday, Monday and Tuesday.

423 Q—Whereabouts on those lands did you go? Where did you start from?

A—We struck the swamp lands very near to the round corral, down about ten miles from what is known as the lone tree. The lone tree is near Goose Lake. The round corral is about 10 miles from there in a northwesterly course. After reaching the swamp land at about the round corral, we went in a southwesterly direction first, about a mile and a half, I should judge. We then went out into the swamp.

424 Q—Did you find any water in the swamp?

A—Yes, sir; there was water all through the swamp.

Q—How far from the round corral before you found this water?

A—The round corral is probably 300 yards from the edge of the swamp, and the water is right on the edge of the swamp—the edge of the tules.

Q—Now will you describe what you did there, your courses and what you saw, after striking the water. After reaching the water, what did you do?

A—After reaching the water we drove out into it some distance. This was Sunday, the first day that I
425 am speaking of now. We drove out into the water some distance and we found we had too big a load for our team. After spending an hour or two in the tules and in the swamp we came out. We were very glad to get ashore, and we drove probably a mile out into the tules on that trip.

Q—Were you driving through water all that time?

A—No, sir; occasionally we would strike the water. In some ground we did not see any water at all. Then we came back to our camp, near the round corral, and camped there Sunday night. The next day we followed the margin of the water by the tules, about a mile, going
426 southward. After that we drove across the tules. I should say about 3 miles across. We went on to the high ground, on the west side of the tules. In going across these tules, we started from the high ground, on the east side, from the margin of the tules, and went in a due west course as straight as we could.

Q—Did you find any water going through there?

A—Yes, sir; water all the way, except occasional islands.

Q—How large was those occasional islands that you speak of?

427 A—Some of those islands, sir, had as much as ten acres; some probably didn't have more than half an acre.

Q—How deep was that water, Colonel, that you drove through?

A—A great deal of that water that we drove through was not to exceed 6 inches deep. The deepest water that we found was probably 2 feet.

Q—In the whole trip across there?

A—In the whole trip across there.

Q—The deepest water that you found?

428 A—Was about 2 feet—was just about up to a man's knees.

Q—Were there tules growing through there?

A—Yes, sir; a solid mass of tules, all the way through. There were occasionally little spots, not larger than this platform, where the tules did not grow, and there were occasionally lakes where tules did not grow; but the whole country was a mass of tules, with the exception of those islands and the lakes.

Q—Can you account for the fact of the tules not growing in those occasional spots that you mentioned?

A—Some of those bare spots, I am satisfied, the tules
429 did not grow in on account of the alkali.

Q—Alkali spots?

A—Alkali spots; that is one reason.

Mr. FLOURNOY—(To the Court)—Mr. Parish, who was on the stand, is anxious to go home. He informs me he wants to make a correction in his testimony, if the Court will permit him.

The COURT—Very well.

Further testimony of

G. W. PARISH.

430 Mr. FLOURNOY—State what corrections you desire to make.

The WITNESS—When the gentleman asked me about the water in 1879, the Livermore ditch took the water was the reason why I didn't get it any earlier. Otherwise I always had plenty of water in the irrigation season.

Testimony of

F. B. MCLUNG.

431 Direct-examination resumed.

Mr. HAGGIN—Did you see any channel in crossing there?

A—I did not.

Q—Well, after reaching the west side of this body of swamp land?

The COURT—Excuse me. The witness testified that he did not see any channel.

Mr. HAGGIN—Yes, sir.

The COURT—I would like to ask him a question (to the

witness). If there had been a channel there, would you have seen it?

A—I would, sir.

The COURT—A person might cross there and not look to see it.

A—Yes, sir; I had my eyes wide open.

Mr. HAGGIN—After reaching the west side, which way did you go?

A—After reaching the west side, sir, we went on to the high ground, the bluff or high land there, in order to be certain that we were through the swamp, and to look off in a westerly direction, to be positive.

Q—And you are positive that you had completely crossed the entire swamp land?

A—Entirely, sir; and got on to the alkali hills beyond the swamp.

Q—What did you do then, Colonel, after going to the alkali hills?

A—We came back and stopped on an island in this swamp and ate lunch and then came back, not exactly in the same course that we went, but some where near the same course that we went over. In coming back, we found the tules just as thick and the country very much the same. This return course was occasionally in the same track of the course we had taken in going across. Sometimes it might have varied fifty or a hundred, or even three hundred feet. The tules were very large and we could not see where we would go, and we got out of the course sometimes, could not see how far we were out of the original course. On this return trip the water was about the same depth. After we came back we followed the tules up probably about three miles, on the margin of the water and camped that night.

Mr. MCALLISTER—Monday night, was it?

A—That was Monday night.

Q—You mean followed to the southward?

A—Followed to the southward. Followed south on the margin of the water.

Mr. HAGGIN—Q—Was there water all along?

A—Water all along, sir. The water did not extend to the edge of the tules in all the places, and we went along the margin of the water and followed the margin of the water up for about three miles and camped.

Q—In crossing that water, Colonel, did you see any current?

A—No, sir; I didn't notice any current whatever.

436 After camping that night, the next day we went to the water, the margin of the water, to a point opposite Dover's, and there we drove across on dry land and went on.

Q—Then following the margin of the water, you were still going southward, were you?

A—Still going southward, yes, sir.

Q—You say you drove across on dry land. What do you mean, that you drove across this body of swamp land?

A—Yes, sir; we drove through the tules where there was no water at all.

437 Q—Did you not see any water at all?

A—No water at all, unless stagnant water in the lakes, or something of that kind.

Q—Did you see any channel through there on this drive?

A—No, sir; a mass of tules spreading right straight through the whole swamp from one side to the other, with the exception of occasional alkali spots or these lakes.

Q—What was the general appearance of that country that you drove through on this last crossing that you mentioned?

438 A—It is a perfect mass of tules, sir. It was uniform in that respect. You could see nothing but tules in any direction that you looked.

Q—You say you drove across somewhere in the neighborhood of Dover's. Did you cross north or south of Dover's?

A—North of Dover's; we came out and struck the canal, ordinarily known as Wible's Canal, about half a mile north of Dover's.

Q—In the last trip across that you mentioned, did you go completely from the east side of the body of swamp land to the west side?

439 A—Yes, sir; entirely across from the canal to the high land on the east side. After reaching the canal I got up on the top of a buggy-wheel and looked down to see where there was a break in the canal, and the water was running off in the tules. This break was in a northerly direction from us. It may have been a little to the west of north. I had no compass, and could not tell exactly, but I should think probably it was a little to the west of north. I could not tell exactly how far off it was. I did not go very close to it. I

440 only stood up on the buggy-wheel to see where the canal was broken and the water running out. We then drove the buggy across the slough at a different course—a course north of the course that we had gone from the east to the west side.

Q—How far north of that preceding course?

A—In places I think it was as much as half a mile.

Q—What was the appearance of the country on that course across? Did you cross completely over to the eastern side?

A—Completely over to the eastern side. The appearance of that body of land through there was very
441 much the same. I saw no different condition—just one mass of tules, broken only by those little islands and an occasional lake. I saw no channel through there. After crossing back through there, we then followed the margin of the tules on up southward to Will's hog camp. At Will's hog camp we drove into the tules and got bogged up in the water, and we got out—found our way out.

Q—How was the water when you drove into it by this hog camp?

A—Well, the water was spread over the tules and we could not tell a great deal about it. The ground was
442 exceedingly soft in there and we could not get in very deep.

Q—You spoke of seeing occasional lakes or lake beds. Did you go around those lakes?

A—Sometimes we drove right through them.

Q—Could you see whether there was any connection, any connecting channel from one to the other?

A—Yes, sir.

Q—Was there?

A—There was none whatever. It was better driving through the bed of the lake and I drove right through the lake several times.

443 Q—Do you mean that you found better driving in those where the water was?

A—No, sir. There was no water on this last trip. I am referring to the last trip now. We did see one lake that had water in it and I drove through it for the purpose of watering the horses, not because there was better driving.

Q—Did you see the ends of that lake?

A—Yes, sir.

Q—Was there any channel leading into it?

444 A—None whatever, sir.
Q—Any leading out of it?
A—None.
Q—In no direction at all?
A—In no direction whatever.
Q—What was the general shape of that lake, if you can say?
A—It was an oblong piece of water, sir. I suppose the water was probably sixty feet across, possibly one hundred yards long.
The COURT—You don't know anything about the sections, do you?
445 A—Nothing at all.

Cross-examination of

F. B. McCLUNG.

Mr. HOUGHTON—Q—Mr. McClung, did you go north of what you call the Round Corral, at all?
A—Yes, sir. In a northwesterly direction. I don't know whether we went directly northward. I don't think we were. I hardly think we were due north of the round corral at any point. We were northwesterly from it. We were possibly a mile and a half from the
446 round corral in a northwesterly course, and we may have been in a northwesterly course as much as four or five miles from the round corral.
Q—I understood you to say in your direct testimony that from the round corral you went a mile and a half southwest. Which is it? Did you go northwest or southwest?
A—Northwest, sir. Northwest on the first trip. Southwest when we made the trip across the tules.
Q—Do you know on what section the Round Corral is?
A—No, sir. I do not.
447 Q—If the round corral is in the middle of a section, where do you think the mile and a half that you went would bring you to in the adjoining section?
A—I could not tell you, sir.
Mr. HOUGHTON—The round corral is marked on this map as in the centre of Section three, township 27, south range 22 east.
Q—Can you tell me where the mile and a half that you went from that point would have brought you to?
A—No, sir. I could not, because I do not know anything about the sections.

448 Q—You had no compass?
A—I had no compass, sir.
Q—How do you know that you went northwest?
A—Because the tules seemed to bear off in that direction, and we followed the margin of the tules right along on the margin of the tules for that distance. We did not go in the swamp at all for that distance. After that we went south of the Round Corral about a mile, the next day, and there we went across the water.
Q—Didn't you start in with a team first?
A—We did when we went north.
Q—Then when you went north a mile and a half you
449 started in with a team and could not get across?
A—No, sir; we did not try to get across. We went in there and came out again. We came out because we were afraid we would get bogged down. We had five men in a heavy wagon and only two small mules to pull it. We did not attempt to make a crossing at that point.
Q—Then the next day when you went south or southwest, you were some two miles and a half from where you made the first attempt?
A—Possibly.
Q—Can you tell from what point you started to make
450 that trip across the swamp land on Monday, southwest of the Round Corral?
A—I can tell that it was about a mile south of the Round Corral.
Q—You did not measure it?
A—I did not measure it, sir. When we went across we went on a course just as near west as we could. We had no compass. The road that was laid out for us by parties on foot, was by following their shadow at seven o'clock in the morning.
Q—How many parties went across there?
A—There were two parties went across on foot.
451 Q—Then what?
A—Then four, not all of them on foot. Four went across in buggies and wagons. The two parties who went across first were Dr. McLean and Harry Reading. I didn't go with them. I went in the wagon afterwards. Pat Murray was with me in the wagon. Nobody else was in the wagon with me. Dr. Thornton and Dr. McLean went across in the buggy or a buckboard.
Q—Then you didn't go across on foot?
A—No, sir; I did not cross all the way on foot.
Q—Did you, after you went through in the wagon, go back?

452 A—I went over in a buggy and came back again in a buggy, with the exception of getting out a time or two. I went back on very nearly the same course.

Q—Why didn't you keep the same course?

A—I think the party that were leading got lost, probably. I don't know. The tules were very tall.

Q—Wasn't it very difficult to get a team through them?

A—Where the ground was soft it was.

Q—Pretty hard pulling, wasn't it?

A—Yes, sir; pretty hard pulling. When we started in to return on that trip, we started in on the same
453 track that we came out on. Then we got off from it.

Q—How could you get off from a track through such heavy tules as that where two buggies had been before?

A—I don't know. I was not in the lead. I was simply following the parties in front, and I was very sorry that they did. I cannot fix the point on the map where that crossing was made. I can state that, in my opinion, it was just about a mile from the Round Corral; but I did not measure it.

Q—Can you fix the point where you came out on the west side?

454 A—No, sir. I cannot fix any point, except that it was as near west from the point we started from as we could possibly go.

Q—How far was it across at the point where you made the crossing?

A—I would judge that it was at least three miles from the one edge of the swamp to the other.

Q—During what portion of that did you find water?

A—The whole distance, sir, with the exception of an occasional island.

Q—You say at no place did you see any current in that water?

455 A—No, sir; at no place did I see any current. I did not look very particularly to see if there was a current.

Q—You did not try to see if there was a current.

A—No; I did not take notice; but I saw no current.

Q—Then, after crossing at the Round Corral, I understand you followed down on the southwest side again for three miles?

A—No, sir; I did not say on the west side.

Q—On the east side?

456 A—Yes, sir. After getting back to the east side we followed the tules. We followed the margin of the water for about three miles, I think, from the starting point, one mile south of the Round Corral. We were all the time then on the margin of the swamp and overflowed land when we were not out in the water. After having come that three miles, we camped that night, and the next day we followed the margin of the water up to a point nearly opposite Dover's.

Q—How far did you go the next morning to bring you to that point?

A—I cannot tell, sir. I don't know how far it is from
457 there to Dover's.

Q—You have an idea about how far you drove the next morning, haven't you?

A—We went in a zigzag course, following the margin of the water. I could not tell how far we did travel.

Q—Couldn't you tell whether it was three miles or ten miles?

A—No, sir; I could not, in a direct line.

Q—Could you, from a point that you reached on the east side, see Dover's?

A—We could. We were then north of east of Dover's house.

458 Q—Then how far were you north of Dover's house?

A—I could not tell you. I can tell you better, when we got to the west side, how far we were from Dover's house. I can give a better idea.

Q—I want to know how far you were when you started for the west side?

A—I could only guess at it. I came out about a half a mile north of Dover's. Where we crossed this swamp land there I should judge it was between three and four miles wide.

Q—Can you tell, from the distance you made and the
459 course you were going and the distance you came out north of Dover's, how far you were north of Dover's when you started?

A—I could, possibly, by making a calculation. I could form an estimate of about what it was.

Q—Well, about what was it?

A—Possibly, four miles.

Q—Then, you traveled in a southwesterly direction?

A—We traveled nearly west, sir, across the swamp, as well as we could.

460 Q—Started four miles north of Dover's, and came out within half a mile north of Dover's, traveling west?

A—I didn't say we started north of Dover's. I said about four miles from Dover's. I didn't say whether north, south, east or west.

Q—How far north of Dover's were you when you started?

A—I don't know whether I was north of Dover's at all. We were on one side. In going across we tried to travel due west. I did not go to Dover's house at all. After reaching the point to which we went, about half a mile north of Dover's, I went up on the banks of
461 the canal.

Q—Then you started across the swamp land again. Where did you start from?

A—We started from the road that runs parallel with the canal.

Q—What point?

A—No defined point. It was north of Dover's house, about three-quarters of a mile—a quarter of a mile further north than where we came out on the other trip—a quarter of a mile or so.

Q—Then, in making that trip across, you would be three-quarters of a mile north of Dover's. What course
462 did you take?

A—We took an easterly course—kept on an easterly course all the way across, as near as we could. The tules were very thick in that country.

Q—How far could you see from the buggy, driving across, in that country?

A—Sometimes, when the tules were not so very tall, by standing on the seat, we could see over the top of the tules some distance. As a rule, you could always stand on the seat and see somewheres, in some places, further than others. Some tules are much taller than others.

463 Q—Where is this hog camp, you speak of, that you went to after going across on that trip?

A—It is on what they call Broder's Island, sir. As to any section, or anything of that kind, I could not locate it.

Q—How far did you drive in the water at that point before you turned around?

A—I suppose we drove a half a mile into the tules there.

Q—I understand you to say, in connection with this trip, that you know nothing at all about the section lines?

464 A—Nothing at all about section lines. All the distances I have given are estimates. I did not measure any of them.

Q—And in travelling, any course you took was simply taking the course as best you could?

A—The best I could.

Q—Without any compass?

A—Yes, sir.

Q—In whose employment are you?

A—In the employment of Haggin and Carr. I have been in their employment since August, 1875. I have charge of one of their ranches.

465

Re-direct examination of

F. B. McClung.

Mr. Haggin—Q—After reaching the Round Corral, which did you first go, a mile and a half southward or a mile and a half northward of the Round Corral, your first course?

A—The first course we went was northwest from the Round Corral.

Q—Then you came back. In speaking of where you
466 struck it going southward, that was on your return?

A—On the return.

Mr. Houghton—Q—Did you when you were down there, see the end of what is known as Wible's ditch?

A—No, sir; I did not.

Q—When you made the first crossing it was below the point where the water ran out of that ditch, wasn't it, below the break?

A—Yes, sir.

C. G. Jackson,

Re-called for defendants, testified:

467 Mr. Haggin—Q—Mr. Jackson, were you within the last month, during the present or preceding month, on or about this body of swamp land between Wible's headquarters and Tulare Lake, or any portion of it?

A—Yes, sir; I was. I was there about the 21st or 22d of last month. I first went to the northwestern portion of it, near Tulare Lake.

Q—Do you know where the Tule House is?

A—Yes, sir. Tulare Lake is north from that.

Q—Do you know where the Round Corral is?

468 A—Yes, sir.

Q—Do you know where Goose Lake is?

A—Yes, sir. With reference to Goose Lake, the Round Corral is north about two miles, I guess, maybe three.

Q—What portion of the swamp lands—where did you go from, start from, to reach this swamp land?

A—From the Lone Willow, located about the southern end of Goose Lake, and a little east of it.

Q—Please give me the course that you took and what you saw?

A—We started on the morning of the 21st, from the
469 Lone Willow there, and went to the Round Corral and from there in a northerly direction, nearly due north, a little west of north, I should judge. We went to the Tule House, the house called the Tule House there. Before reaching the Round Corral and the Lone Willow, I did not go upon any of this swamp land.

Q—After reaching the Round Corral, you say you went to the Tule House?

A—Yes, sir.

Q—In making that trip from the Round Corral to the Tule House, did you go upon any swamp lands?

A—Yes, sir.

470 Q—Did you see any slough or channel?

A—No, sir.

Q—When you reached the Tule House, what did you find there?

A—I found a body of water there immediately at the Tule House. It was, I should judge, 75 or 80 feet, perhaps a hundred feet wide; in some places, narrowing down.

Q—In the slough?

A—Yes, sir. This was right at the Tule House, a little west of it.

Q—After reaching this slough at the Tule House,
471 which way did you go?

A—We followed that slough up about a half a mile northerly.

Q—Will you look at these maps, two and three, and point out the course, as near as you can?

A—Well, if the Tule House is properly located, here it is on Section 32. I don't know what section it is on. If that is the proper location, we started right in here at Section 32, and went northerly about half a mile on the east bank of the Tule House Slough. We

crossed there and went to the west bank, crossed the slough. Where we crossed, there was just a little water, probably six or eight inches deep. It was standing water, not running. After getting to the west side of that slough, we followed it up still further going northerly.

Mr. McAllister—Q—The same slough?

A—Yes, sir. We followed it up about half a mile further until it run out, ceased to show any depression or any sign of a slough.

Q—How was the country where it ran out? How was the lay of the land?

A—Well, apparently level. It came out so as to show no d pression, uniform in its appearance.

Q—Assuming that the water had been turned into this slough at the southern end of it and had been forced down to this place where you say it ran out, could you see any indication there of which way the water would have run?

A—No, I think it would have spread out. It might have got to the east a little there. There was some holes.

Q—Did you go around those holes?

A—Yes, sir. When I came back. I came back that way subsequently.

Q—From the Tule House up to the place that you crossed, did you see any branch of that slough, or any other slough running into it or out of it?

A—No, sir. None at all.

Q—Then after crossing to the west side, going between that point of crossing and the extreme end of it that you went to, did you see any branch or inlet or outlet to it?

A—No, sir.

Q—Then from that end which way did you go?

A—We went in a southwesterly course right across to the west side of the swamp land, the extreme west side. In g ing across there we found apparently a very level country with burned tules, and in places where the tules had been burned, the tules were not so high as they were in other places. We saw no signs of any slough that we were hunting for, or water course.

Q—Any channel at all?

A—None at all, sir. We went completely across to the extreme western side. We then came down in an easterly direction.

476 Q—Going completely across. Can you fix about, as near as you can, the sections?

A—Well, assuming that this map is right—

Q—Speaking of map 3, assuming that the sections are laid off there correctly—

A—If this is the Tule House (pointing on map 3) we went over to about this point here, Section 26, in Township 25, Range 21. From there we then came in a southeasterly course down a couple of miles, perhaps more.

Mr. McAllister—Q—That would be along the margin, wouldn't it.

A—No, sir; it would be right across about here
477 (pointing).

Mr. Haggin—Q—Did you see any slough a channel there?

A—Yes, sir; we came to the end, or the beginning, rather, to us it was, as we came this way, of a slough that ends very abruptly without any apparent channel beyond.

Q—Which end, the northern or southern, eastern or western?

A—The northern end. We followed that up about a mile, I should judge, on the east side of it. We went around the end of it and came up on the east side,
478 somewhat south of the east side.

Q—Then what did you do?

A—At that point we watered our horses and took lunch and then crossed it to the west, crossed right there. After crossing it we went in a northerly direction, and struck an old road there and followed that road some distance northerly. I should judge we went from six to eight miles in a northerly direction until we came to where the tules were very heavy and thick and it seemed very difficult to get in. I got up on the wagon seat and could see some trees very dimly in the distance, probably three trees. We figured that it must be or
479 might be trees on an island in Tulare Lake. After that we took an easterly course. We saw some cattle to the east.

Q—Before starting out on this easterly course during that eight miles—or from the point where you stopped, going northerly—you followed back, I understand, this slough or channel which you first struck there?

A—Yes, sir; we followed it back to the terminus of it.

Q—Then from the terminus of that slough six or eight miles northward, did you see any slough or channel?

480 A—No, sir.

Q—Or depression in the ground where the water would run?

A—We deviated there to the east. We saw a post sticking up. We thought it might be a section corner. We were desirous of getting ourselves located with reference to the ground there. We drove over and it was a big stake and a pump there. There was some wells, a couple of wells in there. Then we drove back on our general course again, in a northerly direction.

Q—Then you say after going up eight miles northerly, you saw some trees in the distance?

481 A—Yes, sir; still further northward.

Q—And you took an easterly course?

A—Yes, sir; we went in an easterly course. We saw some cattle in that direction, and thought possibly there would be, naturally, some water where they were. We went over in that course. After passing the general line of where the cattle were we crossed and went a little further east and struck a slough there.

Q—What sort of a slough was it?

A—It was probably 50 or 60 feet wide, with standing water. We followed that to the end of it, in a northerly direction. We were on the west side of it. We

482 followed it, possibly a mile or a mile and a half, northerly.

Q—Did you come to the end of it?

A—Yes, sir; come to where it ran out in a kind of —, made a pond or a lake. We drove across it to see if there was any outlet to it anywhere.

Q—Did you find any outlet at all?

A—No, sir.

Q—Now you say that you followed that slough in going north. Did you find any inlet or outlet to it, or any branch at all?

483 A—No, sir.

Q—Then you came to this pond and found no outlet to that?

A—No, sir.

Q—Was there any inlet to that—this slough that you speak of?

A—None that I could see. If it had been there I would have seen it. I was hunting for it.

Q—After reaching this pond, which way did you go?

A—We drove right up. We drove up on the east side, or rather, drove southerly on the east side of it.

484 Q—Of the pond?

A—Yes, sir: we crossed around the pond and hunted until we got back to where the slough ended in a pond. We followed up the east side of that slough—followed south on the east side of that slough.

Q—Did you see the place where you had been following it on the west side; could you see across?

A—Yes, sir.

Q—You could see across it there?

A—Yes sir.

Q—How far did you follow it on the east side?

A—I should judge, about two miles, until it termi-
485 nated. We followed it until it terminated.

Q—Did you see any inlet or outlet or branches, or any other slough there?

A—No, sir; there was water in that, but it was standing water. The banks probably varied from six to eight feet in depth in places, and down to nothing.

Q—How wide was it?

A—Well, in places, forty to sixty feet.

Q—Then you came to the end of it on this east side. Now from the pond, following along the east side, what direction were you going?

A—We were going in a southeasterly direction.

486 Q—Then you came to the southern terminus of this?

A—Yes, sir.

Q—From there which way did you go?

A—We drove nearly due south, still watching to see if the stream came in again, or the slough made any appearance again.

Q—Did you find any appearance again?

A—No, sir.

Q—Find any slough?

A—No, sir.

Q—How far south did you drive to see that?

A—We drove—it must be, two or three miles—until
487 we came back down to the slough—that we had headed off just above the Tule House. We kept some considerable distance east. We met Captain Schuyler and Captain Taylor there, and they took a westerly course from us.

Q—You struck the slough, you say—that you call the Tule House slough, the one that you followed from the Tule House before?

A—Yes, sir. We struck it about the same place we

488 had been at before; struck the head of it—the end of it. We then came on up southerly to the Tule House, on the east bank of that slough, following it.

Q—On the east bank?

A—Yes, sir. Came to the edge of the water, on the east side of it, at that time. After reaching the Tule House, we camped there that night. The next day we came in a southerly direction, following down along this way on the bank of the same slough, the Tule House slough.

Q—Can you point it out on the map, starting from the Tule House there, about the course you took on
489 map 3.

A—If this is correct here, we came right around, about two miles—about two miles and a half, right in on that [referring to map 3].

Mr. McAllister—On the east side of the Tule House slough?

A—Yes, sir. Bearing a little further west, as we got down some distance. We followed that from two to three miles from the Tule House. We drove right into it, towards the latter end; drove in the bottom of it, the bed of it.

Q—Did you see any branches running into it or out
490 of it?

A—No, sir.

Q—You followed it two or three miles? Where did that bring you to? Can you fix the point, about, on that map?

A—It brought us, I should judge, to about this point, here, on Section 13, Township 26, South Range, 21 East. At that point we found a slough there, or various little veins or depressions there, running out over a pretty level piece of ground. This bed, that we had been riding down, had apparently given out; and when we came there we met an apparent drainage from the
491 west and from due south. There was some little depressions there, and the water standing at a point right about here, in Section 13, right where we struck it.

Q—Did you follow that?

A—We followed it around on the west side until it gave out. We came to a corral there.

Mr. McAllister—Followed south, do you mean?

A—Yes, sir; in a southwesterly course,

Mr. Haggin—On the west side of it?

A—Yes, sir.

492 Q—Until it gave out?
A—Yes, sir.
Q—Disappeared?
A—Yes, sir. We were following it in a southerly direction, and came to a corral, a square corral; it terminated at about the corral, north of that; it gave out before we got there, I believe. After reaching the corral we still continued a little further in a southerly direction—perhaps a mile—to where there was an old house, and another dilapidated corral there.
Q—Did you say at the corral that you saw any slough or channel there?
493 A—No, sir.
Q—Any water?
A—No, sir.
Q—After reaching the other place, what did you do?
A—We then took an easterly course, a southeasterly course, pretty well south, I think. We set the instruments there and took a southerly course.
Q—Do you know what course it was?
A—Yes, sir. It was south 78 and a half degrees east.
Q—Did you find any section corner there, anything of that sort, any stakes?
A—No, sir.
494 Q—How far did you go on that course?
A—We went right across that body of swamp land to the easterly side of it.
Q—In crossing that body there from the point that you started from, crossing this body of swamp land from where you set your instrument, this course which you took south, 78 degrees east, was that the extreme western side?
A—Yes, sir.
Q—That is, you crossed completely over to the eastern side?
A—Yes, sir.
495 Q—Did you see any water in going through there?
A—Yes, sir. I saw a couple of ponds.
Q—How large were they?
A—Well, perhaps they would not occupy more than half an acre. I saw the end of them all around them. There was no connection between them at all. I believe that was all the water we saw.
Q—Did you see any slough or channel through there at all on that course?
A—No, sir.

496 Q—Were there any tules growing through there?

A—Yes, sir. We struck the eastern side of the body of swamp land, about a mile and a half by our wheel on our wagon, about that distance northwesterly, or northerly, from the Round Corral, from which we had previously started. We came out northwesterly of the Round Corral.

Q—Whereabouts is that Round Corral. Can you designate it on the map?

A—Well, we determined its position as near as possible by subsequently finding a stake below, some four or five miles. It is in Section three, township 27,
497 range 22. After coming out about a mile and a half of the Round Corral, we went right to the corral. We then ran due south, took a due southerly course right down from the Round Corral, about five miles or five and a half miles, to this township line where this fence runs across the line between townships 27 and 28.

Q—Had you seen any sloughs or channel in that course across?

A—No, sir.

Q—Any water?

A—No, sir.

Q—From there which way did you go?

498 A—We determined our position from there. We came to a fence, said to be Lux & Miller's fence, that runs east and west on that line, and we went east, I think, about half a mile, I think it was, until we found a section corner between Sections 34 and 35; southeast corner of Section 34. After finding that corner, we then went in a southwesterly direction down into the section—well, I should judge here (referring to Map 3). We went down in a southwesterly direction into the swamp, still further over into the swamp we came to water.

499 Q—How far before you came to water?

A—About a mile or a mile and a half.

Q—Mr. McAllister—From the Lux & Miller fence, you say?

A—Yes, sir; southeast, two miles from the fence. We struck it at that corner.

Mr. Garber—Going down the slough?

A—Yes, sir; going down the slough.

Q—Before reaching that water had you seen any slough?

500 A—No, sir.

Q—You say you crossed right into the tules?

A—Yes, sir; went through into more pronounced tules at that point. Running down from there we did not see the tules so plain. It was at that point, before getting down there, and running down from the fence we accomplished probably a mile before the green tules began to show.

Q—Then you got down to the water, you say, about a mile and a half or thereabouts, after leaving the southeast corner of section 34. Was that water running?

A—No, sir; it seemed to be spreading. It was not flowing. It seemed to be getting into the low places in
501 the country both ways, both north and south, spreading out. There was a great deal of water there. The country seemed to be covered with it there. After reaching that water we camped at that point. There was a knoll there or an island.

Q—Was that water spreading in any channel or slough?

A—No, sir.

Q—After camping there that night, what did you do the next day?

A—I took a position on the top of a knoll, took my wagon up there and set the instrument and watched Mr.
502 James and also Captain Taylor go across, wade across to the west side. After they returned—I could see them across and return—after they returned we went back to that corner on the line of the fence and followed around in an easterly direction about three miles, to what we determined from our calculation, was southeast corner of section 13, in township 28, south range, 22 east. Found no channels or sloughs in going there, no water.

Q—Were you going through tules on that course?

A—No, sir. We were going out—not green tules. We were out on tule land. Not where there were any
503 green tules, but about the margin of it. After reaching the southeast corner of section 13, we went south a mile and from there we went right across the belt of tule land to the west, crossed over the tule land again, right due west, or in a southwesterly course. We came out at a stake.

Q—One moment. From the southeast corner of 13, you say you went south. Did you go due south?

A—No, sir.

Q—You went south about a mile, you say?

A—We went about a mile south, yes, sir. Down to

504 what we thought—we could not find any stakes there in the tules—what we thought to be the southeast corner of section 24. Then from the southeast corner of section 24, in township 28, range 22, we crossed the body of swamp lands again, going southwestward. We came out on the western side at a section stake there on section 34, the southeast corner between sections 34 and 35. I believe it was.

Q—In going across there, what was the appearance of the country?

A—It was covered with tules, apparently level. We found water at about, I should judge, as near as I could
505 get at it, about the southwest corner of section 25, or the northeast corner of section 35. I know we looked for a stake there. The water was not running. It was a pond of water. I went around the south end of it.

Q—Did you see the north end?

A—Yes, sir; the other parties went around. I saw them while they were going around.

Q—Was there any slough running into it or out of it that you saw?

A—No, sir.

Q—Did you go completely around the south end of
506 it?

A—Yes, sir; around to our general course again.

Q—Was there anything to show where the water would run into it?

A—No, sir.

Q—Or run out of it?

A—No, sir; that pond varied in width. I should judge it was all the way from forty to sixty feet perhaps, and three or four hundred yards long.

Q—From the point that you started to cross this body of swamp land before reaching this point, had you seen
507 any channel or any slough?

A—No, sir.

Q—Any place to indicate where water would run?

A—No, sir; this pond was the first water that we saw. After going around this pond we went to the southeast corner of section 34. I found no other water.

Q—Any slough?

A—No, sir.

Q—Any channel of any sort?

A—No, sir.

Q—Anything to indicate that water would run or where water would run through there?

508 A—Not that I could see, and I was looking for it. From the southeast corner of Section 34, we came right down in a southerly direction to Dover's house.

Q—Was there any slough at Dover's house?

A—No, sir. Dover's house is not in the swamp. It is right on the margin, I should judge.

Q—Before getting down to Dover's house, did you see any slough, channel or water?

A—No, sir. After reaching Dover's house, we stopped there and consulted the tracing of a map that Mr. McCray made of the land this way, and went a little further south, taking a course this map indicated. We
509 went further south, perhaps a mile further, or three quarters of a mile.

Q—Is that the map you mean (showing Map D?)

A—It was a tracing of that map.

Q—For what purpose did you consult that map?

A—Well, we had got down on the ground where that map, or, rather up, it is up stream, south—we had got to where the map began to cover the ground, and we consulted the map with reference to the crossing where it said there were sloughs or channels. We were looking for a channel. After leaving Dover's we went down to about the middle of Section 12, about the
510 center.

Q—You mean that you took this map as your guide?

A—Yes, sir.

Mr. McAllister—Q—What direction did you go from Dover's?

A—In a southeasterly direction along the road to about Section 12. the centre of Section 12, in Township 29, Range 22. From there we took a due east course, as near as we could keep it. We went right across the body of swamp la id again to the east side.

Q—You say you consulted that map? What was the object? What made you select that point there at Section
511 12, to make that crossing?

A—Well, we saw there was no indication on the map that there was a well defined channel there, and we thought we would cross over to see if it was there, to see if the map was correct in that respect.

Q—You say you took a due east course? That, according to this map, would bring you through Sections 7, 8, 9 and 10?

A—Yes, sir; in Township 29, Range 23.

Q—In that trip across there, what did you find?

512 A—In that trip across there I saw two ponds—two ponds of water on our right, or to the south of us. That was the only water that I saw in going through there. I should judge those ponds were about Section 9. They were about midway across. They were small ponds. One was pretty round, and the other was—I don't suppose that would occupy an acre of ground. The other was much more of the nature of a slough or arroyo. There was no outlet to it that I saw. I was north of those ponds, and could see around them. They did not have any connection with any slough nor between themselves; no connection at all. Water was
513 standing in them.

Q—Crossing there, before you got to that pond, did you cross any channel?

A—No, sir; had not seen any.

Q—Any slough at all?

A—No, sir.

Q—Anything to indicate water there? anything to indicate that water had run in a slough or channel there?

A—No, sir.

Q—Then, passing those ponds, which way did you go?

A—Continued right on east.

514 Q—What did you find going through there?

A—Well, tules—pretty high tules; pretty generally level ground; it didn't seem to vary much in appearance.

Q—Any channel?

A—No, sir.

Q—Or slough?

A—No, sir.

Q—Did you go completely to the east side on that course?

A—Yes, sir. Came over to the eastern side of the
515 swamp lands from the extreme western side. We then went in a southeasterly direction towards the Bonestell House. The Bonestell place was in sight to the right of us. We did not go to it. We followed the margin of the swamp lands in a southeasterly direction.

Q—Did you see any water at all?

A—Yes, sir.

Q—Where was that?

A—It was in the margin of the swamp lands, not a great ways from the high lands.

Q—Any channels south?

516 A—No, sir; it seemed to be standing. There were tules growing in the water. We did not go to the Bonestell house. We camped a little ways beyond there that night.

Q—Have you been back to that body of swamp lands, or any part of it, since that occasion, Mr. Jackson?

A—Yes, sir.

AFTERNOON SESSION.

517 Direct examination of

C. G. JACKSON,

Resumed.

Mr. HAGGIN—I was asking you, when the Court took a recess, if you had been down on any portion of those swamp lands again?

A—Yes, sir; I was there. I don't remember the date. It was in the early part of this month. I was with Mr. Fillebrown, Mr. McMurdo and Mr. Dixon. We went down there to run a level across the swamp land—to take a cross section and levels. We went to
518 a portion which is a little north of where I crossed there the last time, on the former trip. I mean, with regard to those sections from 12 through 7, 8, 9 and 11, Township 29, Range 23. I was with Mr. McMurdo and Fillebrown, when they ran the cross section levels across there. It was perhaps a quarter of a mile north of where I crossed before. We did not follow in our former tracks.

Q—Did you go across there the second time with them?

A—Yes, sir.

Q—Did you find any difference in the place where
519 you crossed the second time, through those same sections?

A—No, sir; the line took us immediately across one of the ponds, another pond a little higher up, following north.

Q—Was that the only pond you crossed?

A—Yes, sir; that is the only one. Yes, sir; at that time.

Q—Did you go around that pond yourself?

A—Yes, sir; I went to the north and to both ends.

Q—You went to both ends?

520 A—Yes, sir; went northerly first—to the north end of it.

Q—At the north end; did you go to the north end of it?

A—I went not quite to the end. I did not go around the end of it. I went to it, and went back to report the distance. I saw all of it. It ran out just like all of those holes do—a piece of arroyo that run in there. They just come up to the general surface and end in a slope. I then came back to where the line was and went around to the southern end. The southern end was more of a pond. It was wider and a little more
521 shallow.

Q—Was this pond connected with any other pond or slough, or anything, at either end or anywhere?

A—No, sir.

Q—When you were there, did you go on across with them?

A—Yes, sir.

Q—You found no other pond?

A—No, sir.

Q—Did you, upon that occasion of the levelling, go to any other portion of the swamp lands?

A—Yes, sir; the next day we ran another line. I
522 was with them during the whole trip they made running those levels.

Q—In crossing the next day, how did you find the place?

A—Went to a point several miles south of where we had run, and found water there. On this second trip, we started on the east side and came back over that line again to our camp.

Q—On the east side did you find water? Where did you first find the water?

A—We started at a corner stake there and ran im-
523 mediately across the swamp at right angles. Our other line had been quartering across it.

Q—You came to water, you say. Where was the first water.

A—It was a plowed piece—apparently a ditch, or they had attempted to build a ditch there. They had plowed and thrown up a very pronounced ditch there. On each side the banks were very square, leaving a central piece of ground that had been left there and not taken out. The water was confined in that ditch.

Q—Did you see any water outside of that ditch anywhere?

524 A—No, sir.

Q—Where was the next water then that you came across?

A—It was possibly, I think, a mile and a half on our course.

Q—How was that water?

A—That was apparently spread out over that country there; not moving at all. At that point the teams commenced bogging, and we determined to go across. Those who were immediately doing the levelling—Mr. Fillebrown and Mr. McMurdo and his rodmen—had determined to go right on through, and we would take
525 the teams around. We came around and met them on the other side.

Q—Did you go back?

A—Yes, sir.

Q—Then where did you meet them?

A—We met them on the west side at a point near where they came out. We had got across the water, and ran through to the high land near the canal?

Q—Did you go back into the water again?

A—No, sir.

Q—Did you assist in making that cross section or leveling across there?

526 A—Yes, sir; up to the time I turned and went around with the team where we struck that body of water on that last crossing.

Q—After crossing this place where you said the water was in this ditch, and before coming to the place where the water was spread out, did you come to any water?

A—No, sir; tules, heavy tules.

Q—Then, before coming to that ditch, did you come to any water?

A—No, sir.

Q—Mr. Jackson, do you know, or did you know at
527 any time, where the Gage place was?

A—Yes, sir; I know where he used to live down thereabout. That was in 1871, I think.

Q—Where abouts was it, will you look on Map "I," and see if you can designate the place?

A—I think it was just about Section 21 or 22, I won't be sure. It was about that point, in Township 30, south Range, 25 east. I was there in 1871.

Q—How did you get there?

A—I went over there from my father's place, which

528 at that time was on Section 16, Township 31, south Range, 28 east.

Q—How did you go, right over there from his place?

A—We went down, keeping pretty well down towards the lakes, went around it. In going there we crossed Old River. This was in the spring of 1871, probably the last of March—might have been in April. There was very little water in Old River at that time I crossed Old River.

Q—After crossing that, did you cross any other water?

529 A—Yes, sir; it was the south fork or the south and middle fork of New River.

Q—Did you find any water in it there?

A—Yes, sir.

Q—Was there any water in the south fork?

A—Yes, sir; there was more water there than there was in the middle fork.

Q—You crossed the middle fork?

A—Yes, sir; there was more water in the south fork than in the middle fork.

Q—Was the water running?

A—Yes, sir.

530 Q—After crossing this tract, did you cross any other water, after you left the Gage place?

A—I think not.

Q—Do you know where the water of those two branches that you say you crossed, ran to?

A—Yes, sir; it ran down into the slough there, just north of Buena Vista Lake.

Q—After reaching the slough, which way did it go?

A—We went up to the old adobe house that Tracy and Canfield occupied.

Q—That is from the Gage place?

A—Yes, sir.

531 Q—I ask you, after reaching the slough, do you know which way the water ran or came down those branches; you say it ran into the slough?

A—Yes, sir.

Q—What direction did the water run then?

A—The water was running into Buena Vista Lake.

Q—Have you been around through Buena Vista Slough and in the vicinity of these lakes you refer to, where these branches empty into the slough, at other times?

532 A—Yes, sir.

Q—During what years?

A—During 1872 and 1873, I have seen the water running from the river there. I was there in 1875.

Q—In 1872 and 1873, after reaching the slough, which way did the water run?

A—It ran into Buena Vista Lake.

Q—You say you were there in 1875?

A—Yes, sir.

Q—How was it in 1875?

A—It was running into Buena Vista Lake from the south side. I was on the south side of it—the south-
533 east side of it.

Q—Was that always the way whenever you were there?

A—No, sir. The first time I was there was in 1866.

Q—I mean during the years you have mentioned?

A—Yes.

Q—Always running toward the lakes?

A—Yes, sir.

Q—How was it in 1866?

A—There was not any river there then. In 1866 I was at the Baker dam.

Q—Do you mean there was no Kern River there?

534 A—There was no New River at that point.

Q—Where was the water of Kern River running in 1866?

A—Running down what was called the middle fork—Old River. I was living over here at the east fork, and we called it Old River where the water was running down there.

Q—Was the water running down Old River at all stages of the water in 1866?

A—It was when I was there.

Q—All the way?

A—Yes, sir.

535 Q—In 1866 you were at the Baker dam. Can you point out on this map "I" about where the Baker dam was?

A—It was located on the slough about a mile and a half or two miles from the lake. It was on Section 8, or rather Section 9.

Q—Is that the location on that map?

A—It corresponds with my recollection of it. It was about that distance from the lake.

Q—Was there water there then?

536 A—Yes, sir.

Q—How was that water?

A—There was standing water there at that time. There was no water flowing perceptibly either way when I was there. It seemed to be the dead water there.

Cross-examination of

C. G. JACKSON.

Mr. HOUGHTON—Q—What season of the year was it that you were at Baker's Dam in 1866?

537 A—It was probably, as near as I recollect now, in August or September. I don't remember the exact month. It was in the latter part of the summer. The dam was broken at that time.

Q—Then you say that all of the water was running in Old River in 1866. Was there no water running down the south fork at any time?

A—No, sir; there was water in the ponds standing at points, but there was no running stream. Where I lived at that time, the bed of the river was the highest point of the country around there.

538 Q—What season of the year 1872 and 1873 were you at Buena Vista Slough?

A—In 1872, it was along about March or April? In 1873, I think it was in the spring, about the same time; a little later, I think. It may have been as late as May. I was down about the point where the Gage place was. I did not go to Mr. Gage's place at that time. I do not know that he was living there then. I don't know whether he was or not. I know that it was the Gage place, because I went there subsequently in 1873?

Q—You went to Tracy's. At that time where was

539 Tracy living?

A—In the adobe house he and Canfield. It was located north of that point. I don't know the section it is on. I have seen the house repeatedly, and saw it the other day. It is north of Gage's. I have not been to Gage's since 1873, so I cannot tell how far it was I came by the adobe house the other day.

Q—Can't you tell us about how far it was from Gage's, where he lived in 1871?

A—No, sir.

Q—You say it was north of Gage's.

A—Northerly; yes, sir. I think Gage lived on Section 20 or 21, may possibly have been 22. I know where the Buena Vista ranch is. The Gage place was east of that about a mile or a mile and a half in an easterly direction.

Q—Then that would bring him pretty nearly on the line between 21 and 22, if the Buena Vista house is right here. Will you look at that map "I," and see if the Buena Vista house is properly located there.

A—It seems to be so. I do not exactly know the section.

Q—Then Mr. Gage's house would be between Sec-
541 tions 21 and 22?

A—Yes, sir; somewhere there; from there, Tracy's house was in a northerly direction. It may have been a little east of north. I do not know how far it was from there. I have not been on that ground in that direction since I came by there the other day, by Tracy's place, coming from the swamp.

Q—Where did you come out from the swamp to get on that road?

A—I came out in the direction of Bonestell's place, to the road that comes in there, not through Bonestell's place, but from the road that leads down in that direc-
542 tion towards Bonestell's, and towards the hog camp, and comes over towards the Pioneer Canal.

Q—Where does it cross the Pioneer Canal?

A—I can not say.

Q—Does it cross the Pioneer Canal near its head, or down near Buena Vista Slough?

A—It crosses lower down, my impression is.

Q—How far do you think north of Gage's was this house of Tracy's?

A—I have no idea.

Q—Did you go from Tracy's place to Gage's at that time?

543 A—My recollection is that I did go to about that point.

Q—Don't you know how far it is, if you made that trip?

A—In the following year, or the year still following, that I came down and crossed at Tracy's crossing and came down by the Gage place, and located the position I crossed at, at that time by crossing at the Tracy's crossing, and coming down, I said, "here is about the place where I crossed." And learned at that time that I was near Gage's place.

544 Q—To go back: You say you went from Section 16, Township 31, Range 28 around by the lakes, and crossed the south and middle forks of New River, where did you cross the south fork?

A—I cannot tell exactly; it might have been as much as two miles from Buena Vista Slough. I then went down to the Baker Dam after crossing the south fork. I was in company with my father, and was not aware of what his destination was. I was taking a look at the country, and brought up there at that point, after crossing the south fork a couple of miles from Buena Vista Slough. I suppose we took a westerly course; proba-
545 bly northwest.

Q—After going to the Baker dam, where did you go?

A—We followed in a northeasterly direction along there to the west of the river, and I struck up to a point that I think is about where the Gage place was. We were on the east side of Buena Vista Slough.

Q—Going from that to the Gage place, how many channels did you cross, if any?

A—We crossed the east fork there, the southeast fork, and, I think, what would be the middle fork.

Q—How many times did you cross that south fork
546 at that time?

A—But once.

Q—When you crossed Old River, how near to the lakes were you?

A—Possibly a couple of miles?

Q—Did you follow right along on the margin of the lakes?

A—No, sir: we kept no particular direction there.

Q—When you crossed the south fork, how far below Tracy's Crossing were you?

A—About where the Gage place is about as near as I can get at it—one or two miles?

547 Q—Did you make that crossing before you went to the Baker Dam?

A—No, sir: we made the crossing after we went to the Baker Dam?

Q—How wide was it where you crossed it?

A—It was probably 100 feet wide; maybe 150.

Q—Was it near any house, or was it a ford?

A—No, sir: it was not a ford.

Q—How deep was the water at that point?

A—It was, possibly, at that point—if I recollect now—it may have been 12 or 15 inches.

548 Q—How wide was the other channel that you found —the middle channel, as you call it?

A—That was still wider possibly, not a great deal, but some wider. It impresses me so now.

Q—How deep was the water in the channel?

A—Five or six inches.

Q—Then you went from there to Tracy's?

A—Yes, sir; I don't know how far it was from the last channel to Tracy's. We were not seeking for Tracy's especially. I was with my father, who was interested deeply in the country around there and subject to his driving, and I was not paying much attention to the
549 distance. I do not know how far it was from that point to Tracy's. I cannot tell how far Tracy's house was from the swamp and overflowed land along Buena Vista Slough. He was away from the line of swamp and overflowed land, out in the high land. I don't know how far.

Q—Do you know whether it was one or five miles?

A—I know it was more than a mile, and it might have been over five. I do not know how far it was.

Q—Were you not down there looking at that swamp and overflowed land at that time?

A—No, sir; I was there with my father. He was
550 especially looking at that dam there, of which he had made a report.

Q—Was that dam broken at that time?

A—Yes, sir.

Q—What were you down there for?

A—I was down there on a visit.

Q—Was your father down there with the view of making that report then?

A—He was down there to show me the country.

Q—Then that dam had nothing to do with his being down there?

A—I don't see that it had. We first struck the
551 Buena Vista Slough at that dam.

Q—How far did you follow it?

A—We might have gone a quarter of a mile, or not so far, on the east side. We did not cross the slough at all.

Q—Do you remember whether you found any other channel after leaving the middle fork—after going to Tracy's?

A—I do not. I do not remember of seeing any.

Q—Where did you start from when you took this

552 trip of April 21, 22 and 23, of this year, where you first came to the swamp and overflowed land?

A—We crossed it first just a little west or north, beyond the Round Corral, and struck a spur of it about two miles or two miles and a half northwest from the Round Corral. We were right on the margin of the swamp land.

Q—Then you followed right along the margin until you came to the corral?

A—No, sir; I was at the Round Corral before I struck any swamp land, and I was at least two miles above that before I touched any swamp land. We struck the
553 swamp land at about two miles and a half north of the corral.

Q—That is near Goose Lake?

A—No, sir; away below Goose Lake.

Q—Fix the point where you came to the side of the swamp and overflowed land or the water?

A—About in here somewheres [showing on Map I]. It may have been Section 28 or 27, Township 26, Range 22. We went there with a horse and buggy. In going there we kept outside of the swamp land margin, we first struck the margin of the swamp land about Section 27, Township 26, south Range 22 east. I don't
554 think we struck the margin of the swamp land before we reached that point. I was with Mr. James.

Q—After reaching the margin of the swamp and overflowed land on Section 27, Township 26, Range 22, where did you then go?

A—Went in a northerly direction to a house called the Tule House. The slough that we found at the Tule House was from 75 to 80 or 100 feet wide at that point. We followed the slough there in about a northerly direction about half a mile.

Q—About a mile and a half in all, after crossing it, you followed up on the east side half a mile, and then
555 crossed it and continued along for how much further?

A—For possibly half a mile further, half a mile north we then went in a westerly direction from that point; went clear across the swamp land, and came out on the west side on the high land at a point about Section 26 or 35, somewhere about there. It might have been 35. I did not find any definite section at that point. We could not tell where we were exactly.

Q—You think you went about southwest from there then?

556 A—In a southwesterly course.
Q—Then where did you go?
A—We then took a southeasertly course from there.
Q—How far did you go in that direction?
A—Perhaps as much as three miles.
Q—Some portions of the time you followed along the slough?
A—Yes, sir.
Q—Then where did you go?
A—Went down the slough following it up half or may be three quarters of a mile, and crossed on the east side of the slough at that time.
557 Q—After crossing on to the west side of the slough, where did you go then?
A—Followed right back. Came around to the head or end of it.
Mr. McAllister. Q—Going south?
A—Going north.
Mr. Houghton. Q—Then where did you go?
A—We went on to a stake that was at the post, a large post, from which we could see our general direction, where there was a couple of wells had been bored; we went to those wells.
Q—Then what direction did you go?
558 A—We immediately went back west to our general course.
Q—Then where did you go?
A—Went in a northerly direction, bearing west a little, in a northwest direction all the way, from six to eight miles. After making that six or eight miles in a northwesterly course I then went in an easterly direction.
Q—And struck the slough there?
A—Yes, sir; some distance.
Q—How far did you go before you struck that
559 slough?
A—Three-quarters of a mile or a mile. After striking that slough we followed it about a mile on the west side of it.
Q—Then where did you go?
A—We went to examine a mud deposit that looked like a lake or a bed that had water in it. We went clear around it to see if there was any outlet to it. We went around that lake at that time. We then came back and followed up to the end of the slough that we had just left, and took the east side of the slough and went to the end of it.

560 Q—How far had you followed that slough from that lake going south?

A—A couple of miles. After making that point we kept down in a southwesterly direction.

Q—From the end of the slough?

A—Yes, sir.

Q—Where did you come out?

A—At the Tule House. We camped at the Tule House that night, and the next morning we came on in a southerly direction along that slough that is there. When we left the Tule House we were on the east side of the slough. We kept on it until it commenced bear-
561 ing west.

Q—Did you keep on the east side of it all the time you followed it?

A—Yes, sir.

Q—Were you in it at all?

A—Yes, sir; we were in it possibly in that line, a mile and a half. We came down that line a mile and a half along it and in it.

Q—And then it bore out to the west?

A—No, sir; it was then bearing off to the west, when we were in it.

Q—And it brought you out on Section 13?

562 A—About that point.

Q—Was this slough continuous from the time you got on it at the Tule House until you got to Section 13?

A—No, sir; it was not. It gave out possibly half a mile to a mile before reaching Section 13, about that.

Q—Then where did you go?

A—I went in a southerly direction a little west of the square corral, which was right on the border of the swamp land.

Q—How far did you go south or southwest?

563 A—May be a mile and a half or two miles. After going there we went in a southeastlery course right across the body of the swamp land.

Q—How low down had you got before you started that course across the swamp land?

A—Well, possibly down to 24 or 25, along there, somewhere about that. We then went across the body of swamp land there, and came about a mile and a half, according to the odometer, or measurement by the wheel, northwesterly from the Round Corral. That would bring it about Section 33 somewhere, Township 26, Range 22. After going to the Round Corral we ran

564 due south until we came to a fence that crossed in an east and west direction.

Q—Where did you strike that fence?

A—We struck that fence about half a mile west of the section stake, that we knew to be at that point.

Q—And that, you say, was the southeast corner of Section 34, and the southwest of 35?

A—Yes, sir.

Q—You were traveling due southerly course?

A—Yes, sir.

Q—From that stake?

A—Yes, sir; about right-angles.

565 Q—How far did you go?

A—We went down about a mile and a half.

Q—What did you find there?

A—We found water.

Q—Did you go through it?

A—No, sir; we camped there that night, and Mr. James went through the following morning.

Q—Where did you start from to make that trip?

A—Along about Section 10, Township 28, Range 22.

Q—You did not go through on that trip?

A—I did not go through with him, no, sir. I took a position on a knoll or high land that I camped on—a

566 high point where I could see him.

Q—After you came together, where did you go?

A—We went out to one of these section corners or quarters out there in order to get a course, and we took a southeasterly course to Section 13, southeast corner of Section 13. We then went to the southeast corner of Section 24. From there we went across the body of swamp land and came out at a point—the southeast corner of Section 34.

Q—And from there you reached a point below Dover's?

567 A—We went down to Dover's and stopped to get some water, and had a consultation. We then went to a point about three-quarters of a mile, about the center of Section 12. We did not go to the section corner. We found some fractional corners there, and we calculated that was about the center.

Q—You did not get the center?

A—No, sir; we then ran due east, or as near to it as we could, and crossed the body of swamp land.

Q—In running due east, how did you take your course?

A—We had an instrument there and got a general course?

568 Q—You were down on this swamp land again with Mr. Fillebrown and Mr. McMurdo?

A—Yes, sir.

Q—When you were down there, how far from where you came out on the east side was it, that you started in on the trip when you run the levels across?

A—It might have been a quarter of a mile. I don't understand the question.

Q—How far north from where you had come out on that previous trip, did you start on making the second trip across?

A—Possibly a quarter of a mile.

569 Q—Did you see your wagon tracks or trail, when you were down there the second time?

A—I believe I did. That is my impression now. I saw the point where I came out.

Q—Whose house is it that you came out near down there?

A—I don't know. There is a house there.

Q—When you made your first trip across there going west, about how near did you come out to that house?

A—About a quarter of a mile south of it. When we went back on the next trip we started at about that house, a little to the west of the house and

570 about a quarter of a mile from where we had been the day before.

Q—In going to the house, did you cross your wagon tracks on the second trip?

A—Yes, sir. Then we went about a quarter of a mile further on.

Q—Did you tell these parties about having made a trip across there before?

A—Yes, sir.

Q—They knew where you went across?

A—Yes, sir. They knew I had been across on or

571 about there. I don't know that they knew where I had crossed.

Q—And didn't you talk about it when you were there?

A—Yes, sir.

Q—And you were going back on pretty nearly the same line you went on before?

A—Yes, sir.

Q—In making this second trip you came to a pond and you went around it you say on one side, on the south side and on the north side, until you could see the end of the slough?

572 A—Yes, sir.

Q—How far did you go?

A—Expecting to go round that way, I did not pay any particular attention, but I should judge it was four or five hundred yards. It might have been that distance.

Q—Four or five hundred yards?

A—Yes, sir. To where I could see the end of it. I did not go around the end, I satisfied myself we could go around that way and went back to tell the boys to come that way. I was assisting in running the levels on that trip.

573 Q—What did you do?

A—I did a number of things. I got the general course and kept it for them, and took such observations as would be necessary in a survey of that kind, for the purpose for which it was made. I was driving the team that had the drag on, to break down the tules.

Q—When you came to the pond that you speak of, how did you get around that, with the drag, or cross it?

A—We did not cross it, we went around it. I drove around it, I didn't cross it.

574 Q—Why didn't you cross it?

A—The object was to see if there was any—well, I couldn't drive across there with a team, it was boggy.

Q—What reason did you have to suppose it was boggy. You didn't try it did you?

A—No, sir. I did not.

Q—How wide was the water there where you struck it?

A—Possibly 40 feet. It was possibly two feet deep.

Q—What was the condition of that water?

A—It was still.

575 Q—Was it clear?

A—No, sir; I could not see the bottom of it; I didn't measure it.

Q—How do you know how deep it was?

A—From the general slope of the beach immediately from the water, between that and the bank. It was a still body of water. On the east side the slope was not so abrupt as on the west side.

Q—How was it on the west, very abrupt?

A—More so than on the east.

Q—Would there have been any trouble in driving a team across there?

576 A—Yes, sir.

Q—How deep was that from the bank down, including two feet of water?

A—I don't know that there was two feet of water there. I think the whole depth of it would not exceed two feet, water and all.

Q—How do you know that?

A—I think so.

Q—How deep was it from the top of the bank on the west side down to the water?

A—It was so gradual that I can hardly say what it was. It was probably the same depth, but more of a
577 slope. The height of the bank on the west side above the water was in the neighborhood of a foot and a half or may be a little more; I cannot say positively.

Q—What was the condition of the tules around that lake?

A—They were very dense.

Q—All the way around?

A—Yes, sir.

Q—How did you take your drag around that lake?

A—Put it upon the wagon. We did not draw it around there, not all of the way around. There was a bank around between the general line designated by the
578 tules and the actual water that existed there at that time and that was free from tules.

Q—You took up the drag when you went around there?

A—That is my impression. I am pretty positive we did. I drove the drag around the lake myself. The beach that I speak of around the lake is about 15 or 20 feet wide in some places. The widest place is possibly a little wider than that on the southern side.

Q—Did you go off to the south of that lake at all, beyond the beach that you speak of?

579 A—No; immediately on the margin there.

Q—Who went with you when you went down this slough or channel leading from this lake?

A—I went alone; no one was with me.

Q—You say that in crossing that the first time, you saw two ponds. On which side of you did they lay on the first crossing? About a mile of Section 12, you say you saw two ponds?

A—They were on the south side. On our second crossing we were still further north.

Q—When you saw those for the first time, how far away from your track were they?

580 A—I never saw them but once. When I saw them they were no great distance away. They were where I could see them; perhaps 50 or 100 feet. We did not drive right along side of them; we drove about that distance from them, quartering away from them.

Q—I understand that one of them was 40 or 50 feet wide and 300 or 400 yards long?

A—Possibly that length; yes, sir.

Q—And the other one was nearly round?

A—Yes, sir.

Q—How high were the tules when you went over there?

581 A—They varied in height. The usual height was about eight or ten feet.

Q—How high were the tules where you dragged them down?

A—They reached 12 or 15 feet in some places.

Q—In running that line across did you keep in that direct line when you went across the second time; in running the levels did you keep off in that direct line?

A—Yes, sir; followed it; did not go out of it.

Q—You say you took a course there; who else was along on that trip besides Mr. McMurdo and Mr. Fillebrown?

582 A—Mr. Dixon. He assisted in the manipulation of the drag and other duties. He also assisted in driving, and anything else that we might want. Mr. McMurdo was carrying the rod; Mr. Fillebrown was carrying the level and managing it. We had a regular surveyor's rod.

Q—How long was that rod they had there? It was a regular levelling rod, wasn't it?

A—Yes, sir.

Q—I understand you, that upon this second trip, where you started in to make a crossing from Section 28, that you only went to the point where you found

583 water, and then went back?

A—Yes, sir.

Q—You didn't cross a slough or water there that joined them on the other side?

A—I didn't cross any slough. I came to some standing water; some water that did not seem to be flowing.

Q—How did you get from the point where you left them around to where you joined them on the west side?

A—I went back to the east side and drove clear around to the bridge there with the wagon, and then

584 came down. I could not get across with the wagon, as the mules bogged.

Q—On the levee?

A—Yes, sir.

Q—What do you mean by saying that this second levelling was done directly across the swamp land, while the other was run diagonally crossing it?

A—That is what I meant. One was run at right angles to the general course of the swamp land, and the other was bearing more in the general direction of the swamp land—the direction in which the swamp land was running. The last course was run at about right
585 angles across the swamp land, as near as I can recollect.

Q—Do you know what course was taken?

A—No, sir; I don't remember it now. We aimed to get it at right angles, and we supposed that that was what we were doing. That was one of our purposes in taking that course.

Q—What was any other, if you had any other?

A—To ascertain whether there was any slough in there, or well defined water-course.

Q—In whose employment were you when you took this work?

586 A—Haggin & Carr's.

Q—How long have you been in their employment?

A—About the time this suit was commenced I came down here from the city.

Q—You say that you selected this course across Sections 7, 8, 9, 10 and 12 in that township, by having the map of Mr. McCray with you, that that was the reason for taking it?

A—We jointly selected it.

Q—Near Dover's?

A—Yes, sir.

587 Q—What caused you to select that was having that map with you?

A—Having the tracing of that original map; yes sir.

The COURT. Q—When you went back from the swamp land around Wible's Camp, how far did you have to drive to get to the opposite side where you came out?

A—It was some distance. We got stalled in coming back, and we occupied our time there probably an hour.

Q—Did you notice when you crossed by Wible's Camp the amount of water flowing through the waste-gate there?

588 A—I noticed a considerable amount of water running there, but I didn't notice the quantity.
Q—Was there much water there in the canal?
A—Yes, sir; considerable.

GEORGE F. THORNTON,

A witness called for the defendant, being duly sworn, testified:

By Mr. HAGGIN. Q—You reside in this county?
A—I do.
589 Q—Have you, within the last few days, been on that body of swamp land lying between Tulare Lake and Wible's headquarters?
A—I have, sir. I started to go upon those lands last Saturday, I think it was, the 14th. I started from the Belle View Ranch; leaving the Belle View Ranch, we crossed the river and went down to the Pioneer Canal, and then around the Point of Timbers; around Goose Lake Slough to the Lone Willows, and up north to the Round Corral.
Q—Can you point out, on this Map *I*, where the Point of Timbers is?
590 A—I think the Point of Timbers is down here somewhere, in Township 29, Range 25. I think it is in the neighborhood of Section 14, or Tracy's Old Camp. We went on what is termed Goose Lake Slough. It is also called Button Willow Slough. Passing the Point of Timbers, we went on down the slough and down to the head of Goose Lake, on Section 32, to the Lone Willows. We went upon the margin of Goose Lake, on the east side of it, and through a fence of Cox & Clark's to the Round Corral. I saw no water in Goose Lake. I saw
591 some water in holes at the Lone Willows. After passing Goose Lake we went to the Round Corral, I should judge 8 or 9 miles from Goose Lake in a northerly direction. From the Round Corral, the next day, I went to Poso Ranch after a team. I lost one of my horses. Then I returned to the Round Corral; got back there about three o'clock, or about half-past three. I then took a horse and rode out into the Tules west of the Round Corral, I should judge a mile or a mile and a quarter. There I found water and tules.
Q—How was that water?
A—That water, a part of it, was right in the slough.

592 There is a slough that we came to at the Round Corral which was running. But in the tules it was standing. Right at the Round Corral there is a po. d, lake or slough. It was running there, and it ran off into the tules. I crossed that. It was a very slow current, a sluggish current. It was about 2 or 2½ feet deep. In the tules the water was from one foot to six inches in depth. The water was just spread out over the tules. I drove in there about a mile and it got boggy, and as I was riding a small horse, I returned to camp. It was then late in the evening, and we camped there for that night. The next morning early we started
593 down the swamp land south from the Round Corral.

Q—Before, or previous to this, when you went on horseback, starting of the Round Corral, which direction did you go before you struck the water?

A—I crossed right at the Round Corral, close to the Round Corral. The other party was off in the tules. I was looking them up. The next day we went about a mile south of the Round Corral, and the water had extended to the margin of the tules and outside of the tules. Dr. McLane and Mr. Reading thought it best to try there. I told them to go across and see how the water was, and they went
594 entirely across the body of swamp land and returned, and I went out myself then.

Q—Did you cross through the whole body of the swamp land?

A—Yes, sir; about one mile south of the Round Corral.

Q—You say that the water was outside of the tules there?

A—Yes, sir; the water was outside of the tules. I should judge it was 40 yards; between 30 or 40 yards outside of the tules.

595 Q—From the point you started to cross, was that point on the extreme east side?

A—Yes, sir; on the extreme east side. We went then in a direct westerly direction, as near as possible right across?

Q—You say you found water? Was the water all over?

A—Yes, sir; the water was all over except little salt grass islands, I think three or four of those salt grass islands, just above the water. That water was from two inches to two feet in depth. The deepest water that I crossed at all on that trip was not to the axle;

596 didn't go over the axle of the buckboard. Never exceeded two feet.

Q—That is the front axle or the back?

A—Yes, sir; the front axle of the buckboard. Driving a pair of mules. The average depth of that water I don't think was exceeding six inches. It was not over six inches, I don't think, the average. It was just spread over the whole surface.

Q—How far across was that?

A—I should judge it was three miles. We went completely across and up to the high land on the west side. We then returned to the east side; going back very near
597 the same course. I got out of the channel once; very nearly in the same direction. The tules were tall and you could see pretty well. We went back in very nearly the same direction. There was a rank growth of tules through there, all through, except on these salt grass islands. The whole body of the swamp land except the salt grass islands was covered with a heavy growth of tules. We came back to where the wagon was. Then we came on down about three miles, following the margin of the swamp land, along there all the way to about Goose Lake. We camped there all night. Then we attempted to go into the tules the next morning and
598 cross again, but it was boggy, and we didn't go in. It got very boggy. After that we kept on down, and after we got I should judge about a mile or a mile and a half northeast of Dover's, we crossed the tules on dry land from the east to the west side. That was at a point northeast from Dover's. Dover's was on the west. We were north and east of Dover's. We went from the extreme eastern side to the extreme western side. We came to no water at all in crossing through there.

Q—Did you see any slough or channel in going across there?

599 A—No, sir; I saw some ponds off to one side, but no channel or sloughs. We came out about a quarter of a mile north of Dover's; we then went up to the bank of the Wible Canal; there was water in the canal; it was running a pretty good head. I should judge that the canal was 60 or 80 feet wide down there; and the water was running a pretty good head; I don't know the depth, but a good current. It was very deep there; I never measured it nor went into it; I could only judge; I could see that it was a pretty good head of water. After going up to the canal we then went down the canal about a quarter of a mile or a half a

600 mile, and we turned and went across the swamp land.

Q—You say you went down from a quarter to a half a mile. What was your object in going down there?

A—At first when I saw the water I thought the canal was broke down there, and we got up there and saw there was no break there, and then we turned and went across the tules there. We didn't cross in the same track we had made in going over; we crossed very near the same place, but not exactly the same track. We saw no sloughs or channels in going across. The general appearance of the country in going across there was very flat and level. I saw a pond and some
601 lakes.

Q—Were those lakes and ponds connected at all?

A—No, sir; high tules were growing between them. There was water in only one of them, a very little water in one; the others were dry. After coming back to the easterly side of the slough this second time, we came down the body of swamp land and stopped at Wills' camp; he had hogs in the tules. Then we went to examine that swamp land there, and we attempted to go into the tules again and it was so boggy, the water having just got on to it, so that we could not go in with a team, and we came back again and went to
602 the outside, on the border of the swamp land, and came home—returned.

The COURT—Were those boggy places sand bogs?

A—No, sir; it was water and tules there, and some of it looked like alkali sediment, and the water just getting over on them; before they settle they are very boggy; after the water stands on them awhile they are not boggy; it seems to render them more compact; the water settles in. When the water first strikes it and runs over it, it is very soft and boggy.

Mr. HAGGIN—Have you ever been engaged in
603 farming?

A—Yes, sir.

Q—When and where?

A—I have farmed in California and in Alabama; I have been engaged in farming for 20 years, nearly all the time, except a year or two.

Q—Have you ever had occasion to examine lands?

A—Yes, sir.

Q—With a view to determining their fertility and adaptability for farming?

A—Yes, sir.

Q—How many occasions have you had to make such examinations?

604 A—In purchasing lands, a great many; I can't say how many; a great many occasions I have had to investigate. I have farmed in different portions of California—in Shasta County, Alameda County, and in Kern County, here.

Q—Have you ever made any examination of this body of swamp and overflowed land that you have been speaking of, with a view of its fitness for farming or agricultural purposes?

A—I have examined that body of swamp land from Kern Lake and around Kern Lake, and around Buena Vista Lake, down to Bonestell's, and from Buena Vista
605 Slough down to Bonestell's, on Section 24, I think, Township 29, Range 23.

Q—What sort of farming land did you find that to be around Bonestell's and in that tract?

A—Some of it I consider good. Others by digging down a foot, or from six inches to a foot and a half, you strike alkali and come to a white, hard soil showing indications of alkali, or a bed of alkali. We did so in a great many cases. That is right around Bonestell's there, you will find some land that is very spotted; some would be good and some not so good. It is not regular.

606 Q—In your opinion is that tract of land which you have examined through there in the body of swamp land, good farming land?

A—I would not call it good grain land. I would not consider it as first-class grain land, only in spots.

Q—From your observations, what proportion would be good for farming purposes?

A—I should not estimate that there would be one-half of it. I would not like to buy one-half of it for good farming land. I don't think 50 per cent. of it would be good farming land for grain.

607 Q—Have you ever been in the stock business?

A—Yes, sir.

Q—Have you noticed down there on this body of swamp land, what sort of feed there is for stock?

A—Yes, sir; the feed was very good this year.

Q—Very good?

A—Yes, sir.

Q—You are in the employ of Haggin & Carr, are you?

A—I am.

Q—How long have you been in their employ?

A—I have been in their employ for over seven years; with Mr. Haggin for over ten years.

608 Cross-examination of

GEORGE F. THORNTON.

By Mr. HOUGHTON. Q—I understand you to say that you never examined any of this land below Bonestell's.

A—No, sir; none below Bonestell's.

Q—That is on Section 24?

A—Section 24, Township 29, Range 23.

Q—You first came to the margin of the swamp land, at the round corral?

609 A—Yes, sir. The first attempt I made to go into the swamp land was just a little south or west, right at the camp, where we camped on the slough. I took a horse and went right across into it. I went nearly a mile.

Q—And then worked out?

A—Yes, sir; I got bogged, and I had a small horse.

Q—How wide was the slough in front of the place where you camped?

A—Where I crossed it was 20 or 30 feet wide, and grown up with tules. The water was running in the slough. It was running then northwest, a very slight

610 current. I don't follow the slough at all. I crossed it and went right on the body of swamp land. The next morning we went to the southward, in a southerly direction, about a mile.

Q—Then where did you go?

A—I remained there, and Dr. McLane and Mr. Reading went across the body of tules or swamp land. Then I went after them. After they returned and reported the facts about it, I and Dr. McLane and Mr. McClung and Pat. Murray went across with teams.

Q—You found water all, or nearly all the way across

611 there?

A—All the way across except, I think, there were four salt grass islands.

Q—Was there any current in that water?

A—One place there was a very slight current. That was the only place I saw in crossing at all. I saw no more. There was very slow current moving slowly north.

Q—Where did that water come from?

A—It must have come from Wible's canal at the break. I don't know how far below the break that was. I could not state how far we were below the break.

612 Q—How far is the Round Corral below Dover's?

A—I should judge it must be between 12 and 13 miles. I don't know.

Q—Do you know how far the break is below Dover's?

A—No, sir. I was not at the break.

Q—Have you recently been down to Wible's camp?

A—I have not been to Wible's camp since about one month.

Q—Have you seen any crop of grain there near Wible's camp, just north-east of it?

A—Yes, sir. There is a crop of grain growing there.

613 I never went over to see it. I did'nt go near enough to examine it.

Mr. HAGGIN—When you said Wible's Canal, did you mean the Kern Valley Water Companys' Canal?

A—Yes, sir. The Kern Valley Water Company's Canal.

Q—On the west side of this body of swamp land?

A—Yes, sir.

Mr. HOUGHTON—When you started from the east side of the swamp to go across, and came out near Dover's, from what point did you leave the east side?

A—I should judge on the east side, it was a mile or

614 a mile and a quarter, or a mile and a half, say north-east from Dover's. We then took a south-westerly course and came out between a quarter and a half a mile above Dover's.

VINING BARKER,

Recalled for defendant, testified:

By Mr. FLOURNOY. Q—Do you know anything about the Calloway Canal?

615 A—Yes, sir; I had charge of it in January, 1876. That was the time I began. Before I took charge of it Mr. Calloway had charge. When I went to work there he had somewhere between 8 and 12 teams; I think he had as many as 10. At that time they were working on the ditch, scraping and using excavators.

Q—How long did you work on it?

A—I remained there, I think, until about the first of December, 1876. When I went there, I think, the canal was pretty nearly a mile completed, and some work beyond that, probably a mile and a half. There was not a mile completed at this time, but it was very

616 nearly done. It had been pretty heavy work. They had just started from the bank, where it came out of the slough, and it was a deep cut. I should think that cut was some 40, between 40 and 60 rods, where the cut was deep; from 3 to 5 feet; I don't know but as high as 6. I think there might be some more than that. I could not say exactly what the cut was there, because I didn't work on it. I believe that embraces all my personal knowledge of the Calloway Canal. I think I carried it over two miles while I was working there. I kept at work continuously. When I first went there it was to take an inventory of stock belong-
617 ing to Calloway, and I took charge of it. I was there first as superintendent, and I continued as superintendent all the time. I ran the Calloway stock until about June or July, when that stock was laid off, and I took the contract; or before the stock was taken off I took a contract and put my own stock on, and that stock was taken off, and the work was kept up continuously.

Cross-examination of

VINING BARKER.

618 By Mr. HOUGHTON. Q—I understand that when you went there the canal was completed about one mile?

A—No; it was not completed entirely for a mile. There was no water in it when I first went there. I don't think there had been any water in it. At the point where I took it up, I think, it was 60 feet wide. I can't say how far it was completed up to June or July, 1876. I may have constructed it three-quarters of a mile, may-be more; I won't say. When I left at the end of 1876, I think there was over two miles com-
619 pleted; I won't be certain. Up to June or July I worked the Calloway force, from 8 to 12 teams. After I took charge as contractor, I worked on it two 4-horse teams most of the time, and a 2-horse team. They objected to my working with a heavy force. At the end of 1876 there was about two miles completed. The width of the canal that I constructed was the same as the other, I think, 60 feet wide. When I first began to work there, I hired out to Mr. Carr, Wm. B. Carr. I took my contract from Mr. Carr. Before I left, in the latter part of 1876, the water was turned into the canal. The water came up there in the slough. There

620 was no head-gate in there, and there was a dam across the slough, and when the river was high it went in. There was a dam put across the slough. Mr. James, I believe, was the engineer, and he built a dam across the slough, and when the water came in the slough it ran in the ditch I can't say how far it ran into the ditch. It ran down somewhere near where we were at work, and we let it out. I can't say the exact time that that came down. We let it out on the plains.

Q—You speak of the slough that the water was turned into and a dam put in. Where does that slough run from and to?

621 A—I believe it comes out somewhere near the railroad bridge.

Q—It is a branch of the river, isn't it?

A—I don't know; when the water is very high I believe it runs down there occasionally. I don't know where it runs to after running into the slough. I never traced it down. I suppose it runs into the river.

Mr. FLOURNOY—It is a branch of the river?

The WITNESS—I never followed the slough down. I suppose, of course, it runs into the river.

622 Re-direct examination of

VINING BARKER.

By Mr. FLOURNOY. Q—Are you positive about the width of that canal being 60 feet? May you not be mistaken upon that subject?

A—Come to think of it, I think I am. I think it is 80 feet. That is what I think now, come to think the matter over. When I spoke I thought it was 60 feet. I am of the opinion now that it was 80 feet. I think the first time that I ever knew of any water being down

623 that canal was in May. The last of May or the first of June, because it was in the spring rise of 1876.

Q—When you speak of no water having been in there before you went there, you mean to say that the place where you were at work there was no water, didn't you?

A—No. The way that it was when I went there; I don't think—it might have stood in the canal, but I think there was no outlet. There might have been water in there.

Mr. HOUGHTON—You think that it is 80 feet wide?

A—I am of that opinion.

624 Q—Do you know how wide that canal is beyond the point that you constructed it at that time?

A—I do not.

Q—Have you been a contractor on the main canal since?

A—Never.

THURSDAY, May 19, 1881.

H. A. READING,

625 A witness called for defendant, being duly sworn, testified:

Mr. HAGGIN. Q—Mr. Reading, you live in this county, I believe?

A—Yes, sir; I have lived here off and on since the last of 1874; continuously since 1877. I know that body of swamp land between Tulare Lake and Wible's head-quarters, or between Tulare Lake and Buena Vista Lake. I was there on the 15th, 16th and 17th of May, 1881, this present month.

626 Q—What part were you on; what part of these swamp lands?

A—We went to near the Round Corral. We started from the Round Corral, and went about a mile north, or a little west of north, and we started in through the swamp land. There were five of us in a carryall, with two little mules, and it was in some places pretty boggy. We were afraid we would bog down, so we turned and came back. That was on Sunday, the 15th. We stopped there that night; Sunday night. On Monday morning we came along the margin of the swamp south about a mile, where we stopped, and I waded across; right straight across the slough.

627 Q—You came south about a mile, you say, from the Round Corral?

A—I think so; three quarters or a mile, sir, more or less; somewhere near there.

Q—Was that on the margin of the swamp land?

A—Yes, sir.

Q—Well, from that point about a mile south of the Round Corral, where did you go?

A—I went as near due west as I could go. I followed my shadow right straight across. It was about 7 o'clock in the morning when I started; and I went as

near straight due west as I could go across the swamp. I found water all the way with the exception of knolls.

Q—After striking the swamp, how far before you found water?

A—I found water right at the edge of the swamp, right where we went in.

Q—How wide was that water?

A—Well, sir, I should judge it was three miles, or three and a half, or about that; somewhere between three and four.

Q—What was the distance across the swamp? How far was it across the swamp at that place?

A—About three miles; between three and four. With the exception of the knolls, the water extended clear across the swamp. There were five or six knolls which we crossed. I waded across.

Q—In wading across, how did you find the water? How deep?

A—The deepest part, sir, I should judge, was two feet. It struck me about here [indicating a point above the knee]. The deepest part of it, I should judge, was two feet, more or less.

Q—Just above the knee?

A—Yes, sir. Just above the knee. That was the deepest part through the whole crossing of this body of swamp land. There were tules all the way across, with the exception of those high knolls. The tules were growing pretty high. Above my head. They were dense, very thick.

Q—Did you see any channel in going through there at all.

A—No, sir. I was looking for a channel.

Q—Could you have seen any, had there been any there, when you crossed there?

A—Sir?

Q—Could you have seen any, had there been any there?

A—Yes, sir.

Q—Any sloughs at all, through there?

A—I saw one slough to the left of where I crossed. That was the place where I waded in to see whether there was any current or not.

Q—Did you find any current?

A—No, sir. It was not perceptible. There was no perceptible current.

Q—Did you cross completely over to the western side?

632 A—Yes, sir. We went on to the high land on the western side. After we got over there, we turned around and came back. Waded back to the easterly side completely across. We followed the same track back as near as we could, for the greatest portion of the way.

Q—Coming back did you find any deeper water, than you did crossing the first time?

A—No, sir. After getting back, I got under the carryall and laid there, until Dr. Thornton and Dr. McLane and Col. McClung and Mr. Murray drove across in a buggy and the buckboard. I didn't cross
633 in the wagon the second time. I waited there until they returned. After they returned we started on and came on south, along the margin of the slough on the east side of it.

Q—What do you mean by the margin of the slough?

A—On the margin of the swamp, I should say. The margin of the swamp, on the edge of the water. Followed up the water.

Q—You were following it southward, you being on the east side of it?

A—Yes, sir. South.

Q—Did you see any water to the east of you, in fol-
634 lowing that up?

A—No, sir. We kept well to the east of it all the time. We followed that up, I should judge about three or four miles, something like it, or five miles. After following that up for about five miles, we camped there that night.

Q—In following this up, this five miles, how far were you from the easterly margin of that body of land?

A—We were right along the edge of the water. Frequently we would have to drive in and out to get
635 around the water. This body of water which we were following out, extended to the east of the swamp land and out to the high ground, to the eastern margin of the swamp, all the way along for that five miles. The water was outside of the tules. It was along the south edge of the tules.

Q—Did you see any channel in following there?

A—No, sir; I have no recollection of seeing any. The next day we came on then for about a mile and a half, I should judge, south, to a fence. We came to a fence that run in towards the slough, towards the pond; we came about a mile and a half beyond the fence, to the south; then we struck into the swamp again.

636 Q—You were still following along the eastern margin, I understand you, of this body of swamp land, were you?

A—Yes, sir.

Q—Then you struck into the swamp—did you cross the swamp?

A—Yes, sir; we went completely across, from the east side to the west.

Q—Did you find any water?

A—No, sir; we went right around the water; we went to the south of the water; we saw no water.

Q—Did you see any?

637 A—No, sir; we were in the swamp all the way across.

Q—Did you find any channel in going across there?

A—In going across I saw a depression—one depression in going across.

Q—Did you go around that to see where it went to?

A—No, sir; in going across we did not; in coming back we came around the south end of it.

Q—How much of a depression was that?

A—It was a very slight depression, sir; I should not think—it could not have been more than six inches deep, hardly.

Q—Not more than six inches deep?

638 A—I think not.

Q—Could you designate any point that you crossed to?

A—We came out on the west side of this swamp, I should judge about a mile and a half, somewhere near that, north of Dover's.

Q—What was the general appearance of the country through there?

A—It was level, sir; it was level, filled with tules—tules growing all through it. After crossing there we turned, and then came back and went to the north.

639 Q—You said that you went around this depression?

A—Yes, sir; we went north of it.

Q—North of it?

A—I believe I said south; I intended to say north. We came north, down towards Tulare Lake, coming back.

Q—Completely around it?

A—Yes, sir.

Q—Did you see the place where you passed it—did you see it as you came around it?

A—No, sir; I didn't see the one that I crossed; I don't know; we saw one; I don't know if that was the

same one or not. We came around that where there was no depression at all.

Q—No outlet to that?

A—No, sir.

Q—You crossed that completely to the eastern side?

A—Yes, sir; on to the level ground. After returning there we then came on south to the hog camp. We saw no water at all until we passed the hog camp. After passing the hog camp I went directly south and came to the water.

Q—What hog camp was that, do you know?

A—That was Wills' hog camp.

Q—How far south did you go before reaching that hog camp?

A—I suppose it was a couple of miles, or three miles, more or less; I can't tell exactly. After passing the hog camp, we came to water, probably a quarter of a mile, from a quarter to half a mile, the water was right south of the hog camp, right along on the edge of the swamp; after we got into the swamp a little ways, not far from the edge, I think, from the east margin of the swamp it was not more than a couple of hundred yards, or something like that.

Q—How was that water? In a channel?

A—Yes, sir. In a sort of channel; no channel, it was in a winding slough. The slough came around something like the shape of a horse shoe.

Q—Did you go across there?

A—Yes, sir; I went across there.

Q—Did you cross the whole body of the swamp land there?

A—No, sir; we went across that and then turned out. It got pretty boggy and we turned out, and went out directly east, or a little north of east, to the high land.

Q—You say you saw a sort of slough. Did you cross it to dry land?

A—In getting over that water in the slough to the dry land?

Q—You say you went across that slough?

A—Yes, sir.

Q—Did you cross over to the dry land?

A—Yes, sir; we had dry land on the opposite side; then we crossed it again and struck it.

Q—How deep was that?

A—I should judge it was mud and water probably three feet, mud and water together. I could not tell

644 the depth of the water. It was pretty boggy. We didn't go around the end of that, we struck in across there and came out on high land, back to the eastern side. We then came on to about De Weber's, came out at the road and then came home.

Q—Mr. Reading, through that portion of this swamp and overflowed land through which you went, was there or was there not a continuous channel?

Mr. HOUGHTON—I object to it, if the Court please. It is a mere summing up.

Mr. MCALLISTER—He has stated already what he has seen. He has stated that he saw no channel.

645 Mr. GARBER—The counsel asked the same question of their own witnesses, and it was answered more than once—a dozen times; that identical question.

Mr. HAGGIN—The witness has shown his fitness to answer.

Mr. HOUGHTON—I don't think he has shown his fitness to answer. We put on our witnesses and traced the slough down. We didn't take them across at two or three different points, and then ask them if there was a continuous slough. We traced the slough down, and, after following the slough continuously, we then asked them whether or not that was a continuous channel.

646 Mr. HAGGIN—Do you mean that you traced with the witnesses that slough from one end to the other, before you asked such a question?

Mr. HOUGHTON—I mean to say that we did.

The COURT—I will allow the witness to answer the question.

Mr. HOUGHTON—We will note an exception for the plaintiffs.

The COURT—Note an exception.

Mr. HAGGIN. [To the witness.] Now answer it. [To the reporter.] Will you read the question to him. [The reporter reads the last question.]

647 The WITNESS—No, sir; there was not.

Mr. HAGGIN—Have you ever been engaged in farming?

A—Yes, sir. I have farmed some around there on the section of Mr. Dixon's place, Section 12. I have farmed in Fresno County. Off and on I have been engaged in farming since 1868.

Q—Have you, in your business of farming, had any occasion to make selections of land for farming purposes?

A—Yes, sir. I have taken notice of land as to whether it was suitable for farming or not.

Q—Have you made such an examination of this land as that you can pronounce upon its value for farming purposes?

A—Yes, sir.

Mr. HOUGHTON. Q—You don't know anything about this land except what you saw in crossing at that time?

A—I only know about it from observation?

Q—In crossing it a few days ago?

A—No, sir; not only from crossing that. I have seen the land at different times.

Q—Where?

A—Down on the slough.

Q—At what point?

A—At different points west of Dixon's and northwest of Dixon's.

Q—Over what territory have you been south or southwest of Dixon's?

A—I have been northwest. I have been at the Bonestell place.

Q—What other places have you been on there? Have you been only on the Bonestell place until this trip?

A—Yes, sir. I don't recollect how far now. I recollect one time going around there between Bonestell's place and the levee.

Q—Then you simply crossed the levee?

A—About half way——

Q—[Interrupting.] I mean going north. Have you been north of Bonestell's?

A—No, sir; I was not north of Bonestell's, except right at the Button Willows. I was near the Button Willows at one time. I was on the body of swamp land, at the Button Willows.

Q—How far in did you go?

A—I suppose a mile, or something like that?

Q—Did you just go in and come out again?

A—Yes, sir; I went in and drove out some hogs.

Q—Were you ever at any point north of that until that last trip?

A—No, sir.

Q—Where have you been farming in this country?

The COURT. This all comes properly on cross-examination.

Mr. HOUGHTON. I want to show whether he is an expert or not.

The COURT. Very well.

Mr. HOUGHTON. Q—What lands have you farmed in this county?

652 A—I have farmed at Dixon's place. That is high land, not swamp and overflowed land.

Mr. HAGGIN. What sort of farming land was that in this body of swamp land?

Mr. MCALLISTER. We want to reserve an objection: that this witness does not show himself to be an expert as to the character of these swamp lands. On that ground we object to his testimony, and except.

[The objection is overruled, and exception noted on behalf of plaintiffs.]

Mr. HAGGIN, (to the witness.) Answer the question.

653 The WITNESS—The question is what sort of farming land that is?

Mr. HAGGIN—Yes, sir.

A—I don't think, sir, that it is a good farming land.

Q—Why are they not good farming lands?

A—Too much alkali.

Q—Do you mean the whole body of the land, or is there any part of it?

A—Yes, sir; as far as my observation goes in the whole body of land there is too much alkali.

654 Cross-examination of

H. A. READING.

By Mr. HOUGHTON. Q—You think there is too much alkali in that land to make it good farming land, do you, Mr. Reading?

A—Yes, sir.

Q—You think there is too much alkali in that land to make it good farming land?

A—I do, sir; so far as my observation goes. That is true of the whole body of swamp land.

655 Q—When you crossed the land where you crossed the first time below Goose Lake, you crossed through water all the way?

A—Yes, sir, except the high knolls.

Q—I understood your testimony as to this land applies to this land as well as any other?

A—Yes, sir; it does.

Q—How are you capable, or are you able, to judge of land that is completely covered with water; whether it has got alkali in it or not?

A—In some places the water was very shallow, and

656 you could see that the water had a blackish, alkali look to it.

Q—How many such places as that, would you find?

A—Well, a good many. I could not tell. There were a good many such places as that, going across there.

Q—How many do you think in crossing there?

A—I could not state, sir.

Q—Did you find one or fifty?

A—Well, I saw one. I recollect positively seeing in a shallow place where the water was very shallow, that it showed indications of alkali.

657 Q—Was that all that you saw?

A—I don't know. I have no recollection of the extent that I saw except that.

Q—Do you remember any other, except that one?

A—I could not tell sir, that I saw——

Q—[Interrupting.] What was growing at that place?

A—Tules.

Q—When you went to the Round Corral, I understand you to say, you went about a mile north-west and attempted to cross there and then went back, failed to do so, and went back to the Round Corral?

658 A—Yes, sir. We drove around there awhile and tried to get across. We were afraid of bogging and came back. There was some water there.

Q—Was it running?

A—Yes, sir. There was some water running.

Q—What direction?

A—Going in every direction. I saw the water going north, some again going east and west and south.

Q—You saw water running south there.

A—Yes, sir. Backing up south.

Q—North and east, all four points of the compass?

659 A—I can't state the exact points of the compass. I saw water going in nearly every direction; the majority of the water was going north. There was some water going north.

Q—Then you went back to the Round Corral, I understand, and went south. What direction did you go from the Round Corral?

A—I think it was about south, sir, or it might have been a little west of south. We kept pretty nearly on the west edge of the swamp. Occasionally we would dart out and come back. I think we went about a mile and a half; near that, I think it was a couple of

660 miles more or less from the point where we first started and attempted to cross the swamp land.

Q—When leaving that point, this point a mile southwest of the Round Corral, where did you then go?

A—I then struck as nearly due west as I could, judging from the country, and crossed there.

Q—Where did you come out on the other side?

A—That is rather hard to tell. We came out on the east side a mile and a half, or a mile south of the Round Corral. And I struck as nearly a due west course as I could, and came out on the other side. I can't state exactly where I came out on the west side

661 Q—Did you go to the high land on the opposite side?

A—I did, sir.

Q—I understand you that in that trip you were in the water all the time, or nearly all the time?

A—Nearly all the time, yes, sir. Where I came across I saw a building away off; I saw a building off south, or southwest, I suppose. It was about south of where we came out. At that point, I could not state how far it was from where I came out; it was some distance, probably three miles or four miles; it might have been less; I could not tell the number of miles.

662 Q—Did you go to the levee of the Water Company?

A—No, sir; I did not; I didn't see the levee of the Water Company where I came out.

Q—Did you go below the lower end of the levee of the Kern Valley Water Company?

A—I don't know, sir; I suppose I did. I didn't see the levee at all where I came out.

Q—And you went out to the edge of the swamp land?

A—We went up to the high land; I looked to see if I could see that levee, but I saw none. I don't know

663 what section I crossed there. After getting back to the side from which we started, we came right south on to the edge of the swamp; I think a little east of south, rather; I think it was about three or four miles, may be five, that we went in that direction; then we camped.

Q—Did you get to the Cox and Clark fence before you camped?

A—No, sir; the next morning I think it was a mile and a half, about, before we reached Cox and Clark's fence. I went east of south, I should think. We struck that fence about a mile and a half from where

we camped; I don't know the section. We struck it near its west end, I should judge—100 or 200 yards, or something like that. I didn't go around the west end of the fence; I went through a gap. I suppose we were 200 yards, may be more or less, from the body of swamp land when we went through the fence.

Q—During that mile and a half which you traveled that morning before you reached that fence, did you see any water at all?

A—Yes, sir.

Q—Did you see large ponds of water to the left of you?

A—I don't recollect, sir.

Q—You don't remember seeing any large ponds—very large?

A—No, sir; I don't recollect seeing any large sloughs right along the edge of the swamp at that point; I don't recollect anything of that kind.

Q—If you had seen it, would you recollect it?

A—I might have done so; I might recollect, but I don't recollect; I can't call to mind now that I saw any large sloughs or ponds there. After crossing that fence I think we went probably a mile, near that, in a southerly direction, east of south, I think, still going along the margin of the swamp land.

Q—Did you see any sloughs or ponds along there during that distance, to the west of you?

A—Yes, sir; we saw ponds. We saw some ponds after we left the water, the edge of the swamp where the water goes out. I don't recollect seeing any before that.

Q—After you passed the fence how far did you say you went south-east?

A—I think about a mile or a mile and a half; somewhere near that. In going that mile or mile and a half, I don't recollect that I saw any slough on the west of me as I went along; I don't remember seeing any there.

Q—How near were you to the margin of the swamp land?

A—We went to the edge of the water. There is tules all along there.

Q—You think you went a mile or a mile and a half south-east?

A—I think so. Then we struck out a little south of west into the tules. We went in and then came back; when we came out on the other side I should judge it was about a mile and a half north of Dover's.

668 Q—After crossing there a mile and a half north of Dover's, where did you then go?

A—We came back.

Q—Did you come back in the same track that you went over it?

A—No, sir, not in the same track; we came back north of the way we went over. In coming back I think we came out south of where we went in; that is my recollection. I think we came back and cut across in there, crossed our trail.

Q—Then, before starting to return, did you go north along the margin of the swamp land—after you had
669 crossed over and reached the point a mile or a mile and a half north of Dover's? When you started to return, from what point did you start?

A—We started from the bank of the canal.

Q—Did you start from the point where you had come out?

A—Where I came out of the low land I struck the canal, and we went to the canal; we turned then and bore a little north and came back in the tules probably 300 yards, 250 or 300 yards north of the point where we came out of the tules; about that, I think. Then, in returning to the east side, I think we made a sort of
670 curve to the east.

Q—You didn't take any straight course then?

A—We did not; we made a sort of curve east, came over east in a sort of curve; didn't come back straight. I think we came up south of—we crossed the line where we went in and came out south; that is my recollection of where we went in. I could not state where we crossed that line; I could not tell whether we crossed that line before we had gone 100 yards, or before we had gone half a mile; but I think we had gone 100 yards; I don't know how far we had gone. I could not say how far
671 south of the point where we had started in it was that we came back.

Q—About how far?

A—I don't know; I could not state exactly how far.

Q—Was that a mile and a half or three miles?

A—It might have been more or less.

Q—Can't you tell? Did you go back to your starting point when you came out?

A—No, sir; I think we came out south of the starting point. We didn't return to our starting point at all after we came out; we came on south. I can't say whether we came out a mile and a half or three miles

672 south of where we went in; it was somewhere between that, I should think.

Q—You spoke in going over, going across on that first trip from the east, of getting to a depression six inches deep—how far was that? How far did you travel before you reached that depression?

A—I can hardly say; it might have been a mile, might have been a mile and a half or two miles.

Q—How far was it across the swamp land there?

A—I should judge it was probably about three miles or something of that sort, four miles.

Q—Was that the only depression that you saw in
673 going across there that was six inches deep?

A—Yes, sir; that is the only one that is anything like a slough that I saw; I saw some depressions between knolls, but there was no slough at all; a depression from the knolls—a depression from the top of the knoll.

Q—Was there water in those depressions between the knolls?

A—No, sir; there was no water at all in those depressions—not in any of them.

Q—Then that is the only depression that you saw in going across there that was six inches deep, except
674 those between the knolls?

A—Well, I saw some ponds; I did see some ponds with a little water in them; I saw one on this side before I got into the swamp; on the other side I saw a pond going back; there was no water in there, around the pond no water, no inlet at all.

Q—No inlet to it?

A—No, sir.

Q—Then besides those ponds—those depressions between knolls—in going the four miles across there you found no depression except this one which was six
675 inches deep?

A—In coming back we saw a depression, as I said before; in coming back we saw one and came around it.

Q—I will confine it then to going over—first in going across this swamp land, between three and four miles, you found no depression six inches deep, except the one you have referred to?

A—No, sir; I don't think we did.

Q—Coming back you say you found one—how deep was that?

A—Where I first struck it it might have been probably a foot deep; probably more or less; I didn't cross

676 it where I first struck it; we bore right around it; there was no water in it; we bore around it I suppose 150 yards, and went around it; followed it north; that is the way I went around it.

Q—Did you go around it on the south, too?

A—No, sir.

Q—You don't know how far it ran south?

A—No, sir.

Q—What was growing in this six-inch depression that you speak of—anything?

A—There was not anything; nothing.

Q—How wide was that?

677 A—I judge as wide as from here to that railing.

Q—How wide was the other one that you spoke of that you went around?

A—A little less than that, may be a foot fess than that.

Q—To return for a moment—when you were at the Round Corral did you see a slough in front of the Round Corral?

A—Yes, sir; there was a slough there; I should judge it was as wide or probably wider than from here to the stove; may be a little more—twenty-five or thirty feet. I didn't go through it at the Round Corral; I crossed it

678 down below there.

Q—Where?

A—I don't know that I crossed it; I went across one. I crossed a slough below there when I went down a mile. The slough that I crossed there was three, or four, or five inches deep, and I suppose as wide as from here—I suppose fifteen, may be ten or fifteen feet wide.

Q—Fifteen feet wide and three or four inches deep?

A—More or less.

Q—Was there any water in it?

A—Yes, sir. I could not say whether the water was

679 running or not. In the slough at the Round Corral the water was moving.

Q—Did you follow that slough at the Round Corral south at all?

A—No, sir; we didn't follow that slough.

Q—Did you when you went north and followed along up a mile, follow along the bank of the slough, or attempt to follow along the bank of the slough that was at the Round Corral?

A—No, sir; we didn't attempt to follow right along the bank of the slough.

Q—Now, in coming back again, can you tell what

680 sections you passed through when you made this return trip from the point north of Dover's?

A—No, sir; I cannot.

Q—After coming out to the east side, three miles south, from one to three miles south of where you started in, where did you go then?

A—South of where?

The COURT—On your last trip, as you testified in going over, when you came out to the east.

A—We came on south then.

Mr. HOUGHTON—Where to?

A—We came on to Wills' hog camp; I don't know
681 in what section the hog camp is; it is a very short distance from the tules; it is on the high ground.

Q—Outside of the tules?

A—No, sir; there is some tules to the left of it. I think it is in the body of swamp land, on the east side, I think; I don't know what section it was on; I know where the De Weber place is.

Q—How far is that south or south-west from the De Weber place?

A—It is not south-west of the De Weber place; it is probably a couple of miles, two miles and a half, or somewhere near that, north-west of De Weber's. At
682 this hog camp we found a slough; we drove through it.

Q—Crossed it on your way back?

A—Yes, sir; I think we crossed it on our way back; then we went to the De Weber place from that point after we came out. We came out east then to the high land, and went to the De Weber place, and from there we came home.

Q—By what route did you come home?

A—We came up to the Bonestell place, to the road that leads into the Bonestell place, and down by the old Tracy or Dover building. We came on that road;
683 we traveled about south-east, I should think; we were north of the Dixon Ranch coming home.

Q—What side of the Pioneer Canal were you on after you crossed from the De Weber place when you came to it?

A—It would be on the north side of the Pioneer.

Q—Did you come out at any point between the end of the Pioneer Canal and the body of swamp land?

A—No, sir; I think not.

Q—How deep did you say the water was where you made this crossing, and went through those two ponds?

A—I should judge the deepest part of it was about two feet; it came up above my knees.

684 Q—Did you go back after making that trip to and fro, not having been in the water at any point above your knees?

A—I was above my knees in some places.

Q—How far above your knees?

A—About that far (showing). I should judge about there.

Q—You didn't get into the water at a greater depth than that on the whole trip?

A—I waded into the slough on the west side; I waded in it; I should think it took me about here (indicating a point just below the waist). I then walked back; I
685 didn't cross the slough; I should judge that slough was about waist-deep in the channel; I waded into it, I should judge, as far as from here to that railing; probably 15 feet; something like 15 feet—may be 16 feet.

Q—How wide was the slough where you started to wade across?

A—It might have been 30, or may be 35 feet.

Q—Was the water running at that point?

A—Not perceptibly, sir; I could not see that it was running at all. I waded out for that purpose, to see if there was a current.

Q—After you attempted to cross that slough, where
686 did you then go?

A—Went north of it, and around that slough.

Q—How far did you follow the slough?

A—I went down 200 yards, or 250.

Q—Then what did you do.

A—Went right across the tules to the high land.

Q—How did you go across that slough?

A—Just walked right across it.

Q—How deep was it where you crossed it?

A—There was no slough there, sir.

Q—It run out?

A—The tules had come together.

687 Q—Was there any water at all there where you crossed it, when you went to high land?

A—Yes, sir; there was water when I crossed north of this slough.

Q—How much water?

A—It was knee deep; about knee deep; I could not tell how wide it was at that point; the water extended out on both sides of the tules.

Q—Then when you came back after going——

Mr. Haggin—Whereabouts is this you are speaking of?

688 A—On the west side; the west side of the slough about a mile; I can't state the point it was;——

Q—(Int'g). At which crossing?

A—The first crossing in the water; when I waded across through the water.

Mr. HOUGHTON—Then when you started to go back to the east do you go across this same point that you had gone across when the water was about knee deep?

A—Nearly at the same point; it was about the same point; I don't know that it was exactly the same; I think somewhere near that point; I could not state how near.

689 Q—Didn't you go back in order to find it?

A—I went within probably 20, or 30, or 40, or 50 feet of the crossing I made in the first place.

Q—Then when you started to return, you started about 200 yards from where you came out of the slough?

A—Two hundred yards?

Q—Yes, sir; you say you came to this slough and waded in.

A—Well, I should judge I came back to this high land, came across and came back about on the line I went in on.

690 Q—Who was with you on this trip?

A—Dr. McLane; no one else; I didn't return with the other parties when they crossed in the wagon and the buckboard.

Re-Direct Examination of

H. A. READING.

By Mr. HAGGIN. Q—In this last trip you say you came to water about a foot and a half deep; I under-
691 stood you to say that you came to water a foot and a half deep, and Mr. Houghton asked you the question whether you returned and crossed about 200 yards from that point?

A—No, sir; the pond. When I got to the left side of the slough I came up against the west side of the swamp; I came up to the slough; I waded out into that slough, I should judge, fifteen feet, it might have been a little more or less, to see if there was a current; there was no current there; I then went around north, around the slough to the north side, and crossed the water; the

692 water was spread right out on both sides; I crossed around that and then went up to the high land; then I started to go into this slough, or whatever it was, this hole there on the north side, and came back.

Q—And went around it; is that it?

A—Yes, sir; I came back and went around north of it.

Q—Headed it off?

A—Headed it off, yes, sir; I saw that there was no perceptible current and I waded around it.

Q—Then I understood you that when you first made that crossing and waded across there, you started to
693 wade into a deeper place, whatever it was, and then turned and went back?

A—When I started from the east side to wade across to the west side.

Q—On the east side you said you came to a place about half way—

A—(It'g.) That was when I came to the pond, or slough, on the west side, after I got across; that was the last water on the west side; it was on the west side that I came to that slough; that is the place I was speaking of just now; I started on the east side and went as near due west as I could to the west side, and that was the
694 extreme west water; that slough.

Q—Was that the only body of water that was in the nature of a slough which you crossed there?

A—Yes, sir.

Q—And that, you say, you went around?

A—Went around that to the north of it.

Q—You say that you went up to the bank of the canal when you crossed over there, not far from Dovers I think it was?

A—Yes, sir.

Q—Did you see water from where you went on it? Did you see water running out of the canal?

695 A—No, sir; I did not.

Mr. Houghton—Mr. Reading, you say this slough you came to on the west side was the last body of water that you came to in crossing?

A—That was the extreme water on the west side of the swamp.

Q—How far was it from the eastern bank of that slough to the water that you reached before—the last water that you had seen before?

A—The east bank of the last water I had seen right to the east.

Q—Yes, sir?

696 A—Well, sir, I should judge it was; there was a little ridge running through; a little knoll running east and west, I suppose it might have been 150 yards, more or less.

Q—What was the nature of that bank of that slough, where you went into it?

A—There were some tules growing on it; on the edge of it; where I went into it it was sloping; there was one step off right near the edge of the water.

Q—How was it on the other side did you say?

A—I think it was a more abrupt place on the other side; a little steeper than the east side; I can't state ex-
697 actly, because I didn't go on that side of it.

Q—How far, after going back, did you follow along the east bank of that slough before you came to water? You say you came back to the eastern bank of the slough on this little ridge or knoll; how far did you follow that north before you came to water—to water in any shape?

A—That was when I was going through.

Q—Yes, sir, in going west.

A—I suppose 200 yards, more or less.

Q—You followed along the bank?

A—I didn't follow exactly along the bank; I went into the tules; there were some tules along there. The
698 water was spreading out on both sides; I waded right through the water to get around it; the water was spreading out on both sides.

Q—How far did you go along the bank of that slough before you went into the water?

A—Before I went into the water, it was not very far; it might have been thirty or forty yards, or something like that.

Q—How far did that high bank or ridge extend towards the south?

A—It only extended a very short distance; I didn't go to the southern extremity of it, but saw the tules to
699 the south of it.

Mr. Haggin—In speaking of the depth of the water which came up above your knees, you made the remark: "about here." The reporter can't get down what that depth was. Give me an idea what you mean by that depth of water.

A—I should judge about two feet.

The Court—You say you went around that slough, went to the north and went around it. You say you went around the end of it. When you crossed there

700 you say the water was about a foot deep, as I understand you.

A—No, sir; I said it was about knee deep.

Q—Were there any banks there?

A—No, sir; the water was out on both sides; both east and west; extended right east and west, and the tules came together right there.

Q—Was that place full of tules?

A—Yes, sir; there were tules all along north of it.

L. L. Dixon,

701 A witness for defendant, recalled, testified:

Mr. Haggin. Q—Were you down about this body of swamp land between Wible's camp and Tulare Lake?

A—Yes, sir; I was there within the last month or two. I think I was there last on May 11th. I was down below Bonestell's, down about the cross section which was run across to Dover's.

Q—Who were you with?

A—I beg pardon. That was not the last time I was down there.

702 Q—Well, this time that you speak of—who were you with?

A—I was with Mr. MacMurdo; no one else.

Q—Were you down there before that?

A—I was down there about April 28th or 29th; camped down there at this same place. On that occasion I believe Mr. Jackson was along and Fillebrown and MacMurdo. We had a Mexican boy with us.

Q—What were you doing? All of you?

A—I was recording the distance across the swamp and breaking down tules.

Q—What was the party doing?

703 A—Running a cross section across the swamp.

Q—Was that the time Mr. Fillebrown was running levels across there?

A—Yes, sir; it was the time that I was there with Fillebrown and MacMurdo, when the levels were run across there; Mr. Fillebrown ran those levels.

Q—Did you go across there completely with them?

A—Yes, sir; went across ahead of them. In going across we struck a little pond out there after we had been out about two miles and a quarter or two and a

704 half, or something like that. That was the only water that we came to in going across there on May 11th.

Q—I am speaking of the occasion of running those levels across there with Mr. Fillebrown and Mr. MacMurdo?

A—That was the only water we struck then, on the 28th. I went around that pond; drove around the south side of it; I did not myself go around the north end of it on that occasion.

Q—In going around the south side of it did you see any inlet or outlet to it?

A—No, sir; I didn't see any. We drove right around
705 the margin of the pond.

Q—Do you remember what sections they were you crossed?

A—I think I could point it out on the map.

Q—If you please.

A—I can point out about the line. (Refers to map 2.) There is Dover's camp there; we started in somewhere about the camp of Harold, where Harold resided; I don't know whose camp it was; a little house two or three miles from Bonestell's. Went through sections 10, 9, 8, and 7, as near as we could, in township 29, range 23, and a portion of 12 in the township immedi-
706 ately to the west of that, township 29, range 22.

Q—In going across there did you see any slough or channel?

A—No, sir.

Q—After making that trip across there which way did you go?

A—We came right over the lines, came back and camped on Button Willow Slough; we then went down to the township corner.

Q—What do you mean by the Button Willow Slough?

A—That is a continuation, I think, of what they call
707 Goose Lake Slough; a continuation of that slough running off away to the high lands.

Q—Then you went down where?

A—To the township corner; I think it was the southeast corner of section 28, township 29, range 24. I was still with the same party. We went very nearly across the body of swamp lands there; I could not tell how far I went; we went as far as we could, until the water stopped us; I was driving along with the wagon, and had to turn back on account of the water spreading out over the tules.

Q—How far do you think that was?

708 A—Well, I took the exact number of revolutions of the wheel; you can make the calculation; I think probably a mile and a half or three-quarters; I have the revolutions in a little book that I kept at the time. There were 593 revolutions. I think the circumference of the wheel was about twelve and a half or thirteen feet; I don't know exactly; I just kept the tally of the revolutions; I did not measure the wheel; Mr. Fillebrown has the measurement of it.

Mr. HOUGHTON. That is the point where you turned to go back?

A—That is the time when I stopped.

709 Mr. HAGGIN. You turned to go back; you say you struck water; how was that water?

A—We struck what looked like it might have been intended for a ditch, but never was finished; or a levee or something of that kind; that was the first water we struck; the water was in that ditch; there was some right in the center of it; furrows plowed in there and the dirt thrown out; the middle had never been taken out; the water was in right there; there was no water outside of it where we struck it; there was none to speak of.

Q—How far beyond that did you strike this body of
710 water that stopped you?

A—I don't know if I have got the number of revolutions to that place or not; it was probably a half mile or a mile, or something like that.

Q—Now I ask you how was that water; was it in any channel?

A—No, sir. We were on a high salt grass ridge, just before we went into the first water after leaving this ditch, and that sloped off that way on to the general level of the tules; this was a high ridge that we passed over. I suppose the water that we crossed there that was standing was about thirty feet wide, probably; then
711 about two or three hundred yards further on we came to the water that was spread out in the tules; there I turned back; I didn't go into the swamp land again that day; after I got through with that I came home.

Q—You went down on May 11th. Whereabouts did you go on May 11th?

A—Went down on to the first cross section; we ran down across to Dover's, and I went back to that pond that I spoke of.

Q—Before getting to that pond, or in getting there, did you see any water?

712 A—Yes, sir; we started to go right through on the same line that we had run but could not do it on account of the water; we struck water very soon after we left that little cabin.

Q—How was that water?

A—Spreading out over the country.

Q—Did you go around that?

A—Yes, sir.

Q—Did you go through it?

A—No, sir; we drove into the edge of it and bogged the horses, and turned and went north, and then went east until we got on that high ridge there; there is a
713 little cabin on the ridge, out there in the center; I believe it is what they call Broder Island; I am not positive; then we kept pretty well to the north of the water until we got around it; just beginning to come; we were right on the edge of it and could see it spreading all around in every direction; then we went around and came in on the cross-section, between this water and the pond that I spoke of.

Q—In going around that water, going along to the cross-section to about where the pond was, did you cross any water?

A—No, sir.

714 Q—You continued around this; did this water extend north of where you struck it at the point where the pond was?

A—Yes, sir; we came around here; the cross-section was about this way; when we got in here we turned and went around this way and came back up that way, (describing sundry lines on the floor of the platform).

Q—Well, we can't understand that at all?

A—I can show you on the map there the way we went; we went off the line about three-quarters of a mile.

715 Q—You went off your line and went north?

A—Went off about three-quarters of a mile and then turned almost due south and got back on to the line.

Q—When you got back to the point where your line crossed the pond, did you see any water to the east of you?

A—Yes, sir.

Q—How far was the water to the east of you from this point?

A—It was but a short distance; I don't think it was over half a mile, or three-quarters.

716 Q—Then, when you got back to the pond, did you go around it?

A—Went all around it, yes, sir.

Q—On the north side of the pond too?

A—Yes, sir; drove entirely around it.

Q—Was there any outlet or inlet to that pond?

A—No, sir; we drove around the north side of it and we found where it ran out on to the general level of the ground; then a few rods below we found a little road; I don't suppose it was over six feet wide; it had just run off in a low place there, not more than two or three hundred yards long; we went down that a piece
717 and then turned and came back.

Q—Was this water that was in the pond connected with this water that you saw?

A—Yes, sir.

Q—With this water that you ran around?

A—No, sir.

Q—No connection?

A—No connection whatever.

Q—Did you cross—did you go through that pond that is on the line of the survey?

A—Yes, sir; we did not when we ran the first line; when MacMurdo and I went down there we drove right
718 across; we saw some tracks crossing it and we wanted to try it with the buggy.

Q—How deep was it?

A—It struck the horses about the knees; about knee-deep for the horses; I hardly think the water was that deep, because they would sink a little in the mud, and it merely came over the knees.

Q—After going across the pond, where did you then go?

A—We came back to the Belle View Ranch; came right back the way we went; came around the water.

Q—Do you know where New River divides?

719 A—Yes, sir; I know where it is; I have been about the different branches of New River where it divides.

Q—Have you ever lived at the Buena Vista Ranch?

A—Yes, sir; I have lived there; I have lived there all the time since I have been in Kern County.

Q—Do you know where what is called the Lake Ranch is?

A—Yes, sir.

Q—Can you point out on this map what section it is on?

A—Somewhere near Section 10 or 11; I forget now exactly.

720 Q—What township and range?

A—I don't know that I remember the township and range; I could show you on the map, if I had one; right close to the margin of the lake.

Q—Is it on this Map H?

A—Somewhere along here (pointing on Map H), one of these sections in Township—I don't remember now which; in Township 31 South, Range 25 East.

Q—Whereabouts is the Buena Vista Ranch situated on that map?

A—It is on this section on here, Sec. 20, Township 30, Range 25.

721 Q—Have you ever crossed from the Buena Vista Ranch to the Lake Ranch?

A—Yes, sir.

Q—When?

A—I crossed there in March, 1877.

Q—Can you designate on this map the way you went?

A—Well, sir, I went just as straight from Section 20 as I could to the Lake Ranch house; if that is located on here I can tell.

Q—It is not located on that map. You will find it on this Map I.

722 A—You want me to name the Sections?

Q—Buena Vista Ranch you have named. The Lake Ranch—what part of it is on this map?

A—On Section Eleven; the south-east corner of Sec. Eleven, Township 31, Range 25.

Q—Is that correct, do you think?

A—Yes, sir; as I remember it.

Q—Look at Map "H" again; in going across there you say you went very nearly in a straight line, as I understand you?

A—Yes, sir.

723 Q—Did you cross any branches of New River? New Kern River?

A—Yes, sir; I crossed the central branch, for one; I crossed these other two branches here.

Q—Do you mean these branches shown on this Map "H?"

A—Yes, sir; I crossed two or three branches there.

Q—This is the central branch; where did you cross that?

A—I crossed that a little south-east of Sec. 20.

Q—Through what section would that be?

A—I went right out that way; crossed it somewhere in Section 28.

724 Mr. GARBER—When was this?

A—In March, 1877.

Mr. HAGGIN. Q—When you crossed that central branch, in March, 1877, was there any water in it?

A—No, sir.

Q—None at all?

A—No, sir.

Q—Then you say you crossed through there, across these two others?

A—Yes, sir.

Q—Whereabouts—in what section did you cross these two others?

725 A—It would be along in Sections 33 and 34.

Q—Those are the two southern branches, are they?

A—Yes, sir.

Q—Did you find any water in either of those?

A—Yes, sir; found water in both of them.

Q—Was that water running?

A—I would not be positive; I think it was running in the extreme southern branch; there was water in the other one; I would not be positive whether it was running or not; if it was running it was running a slow current; the extreme southern branch had running water in it.

726 Q—Did you cross any other branches after that?

A—No, sir; that was the last. That was right up against the levee.

Q—In going from the Buena Vista Ranch, did you cross any other channel north of the central branch?

A—I have crossed one or two branches up there.

Q—Do you know what channel that is?

A—No, sir; I never heard any name given to it.

Q—Have you ever heard of the Gage Slough?

A—Yes, sir; I have heard of that.

Q—Is that the one you mean?

A—I never considered that a branch of the river.

727 That Gage Slough runs right through the field.

Q—Was that one of the channels you mean you crossed?

A—Yes, sir; I crossed that before I got outside of the fields.

Q—Now, when you crossed that central branch, Mr. Dixon, you said there was no water in it. What sort of a channel was that?

A—It was a channel tolerably wide, with flat banks.

Q—How deep was the bed of the channel below the surrounding country—below the banks?

728 A—Well, where I crossed it I don't think it was more than six inches; twelve or thirteen inches in the deepest place.

Q—How deep were the banks of those two southern branches of the two forks of the southern channel?

A—They were pretty steep banks.

Q—Mr. Dixon, will you look at this Map "H." There is a channel there connecting this middle branch or central branch with one of the south branches. Have you ever seen that?

A—Yes, sir.

Mr. McAllister—You mean that cross channel?

729 A—Yes, sir.

Mr. Haggin—When did you first see that?

A—Three or four years ago; I could not name exactly the time; I used to go up there to go in swimming.

Q—To go in swimming in that channel?

A—Yes; sir.

Q—Why would you go there to swim?

A—It was a nice deep place to swim in. I used to hunt ducks up there some time in the winter.

Q—You have known that you say. How many years ago did you notice it?

A—Three or four years ago; I don't remember ex-

730 actly when.

Q—Did you know that in 1877?

A—Yes, sir; I think it was as early as that, if not earlier.

Q—Have you ever been at Cole's Bridge?

A—Yes, sir.

Q—Were you ever at that point before the bridge was constructed?

A—No, sir.

Q—Do you know anything about farming?

A—I have lived on a farm nearly all my life.

Q—Do you know anything about the difference in

731 farming lands? The quality of lands?

A—I know good land from bad, sir.

Q—Have you been much on this body of swamp lands we have been speaking of off and on at different times?

A—I have been over a good deal of it, sir; I have been over a good portion of it at different times.

Q—What sort of farming land is that?

A—I should call it very poor.

Q—Why?

A—Because it has a good deal of alkali in it; mixed with it.

732 Cross-Examination of

L. L. Dixon.

By Mr. Houghton. Q—How far down have you been on this body of swamp and overflowed land?

A—I have been fifteen or twenty miles below Goose Lake. I crossed there once; I could not tell exactly what point; I came below Goose Lake, the lower edge of it.

Q—Fifteen or twenty miles below Goose Lake. How near were you to Tulare Lake?

A—I could just approximate the distance; I don't
733 know exactly what distance that was. That was in the early part of 1880, along in January or February; I forget now exactly which. I was examining lands on the other side of the slough, very near the Templor. I simply drove across the swamp land; I was not examining it; I was driving across it.

Q—Outside of that, what other times have you been upon this land, other than what you have testified to?

A—I have been up and down more or less, hunting and fishing. I have never been below Goose Lake at any other time than that.

Q—Do you know the land near the headquarters that
734 is now being farmed—near Wible's headquarters?

A—I think I know a piece down there that Norton put in last year or the year before; I don't know which; I have been about there this year; I was there at night; I don't remember noticing in this year; I don't know who put crops in this year.

Q—Haven't you driven right along the canal this year by the headquarters?

A—Yes, sir, I have once or twice.

Q—Three or four times, haven't you?

A—I never counted the times; I might have been four
735 times, might have been three times; I did not keep count.

Q—You went right by the headquarters and didn't see the land that Norton has in within a quarter of a mile of it? Didn't you notice that?

A—No, sir. I saw a lot of hogs down there in the water; I didn't see any land in cultivation.

Q—You didn't see a grain field right opposite the water there, within a quarter of a mile of it?

A—No, sir; I didn't notice it; it might have been there, but I didn't notice it. I don't know what kind of a crop there was there this year; I didn't see it.

736 Q—Did you ever go there before this year and examine that land where it is under cultivation?

A—I saw a piece of grain there when I was taking certificates. I think that was last year. Norton was cultivating it last year; I didn't see him harvest any of it.

Q—Do you know what kind of a crop he had in on that land last year?

A—I don't think he harvested it at all; I don't know anything about it further than that I saw it there and that I saw hogs running in it.

Q—You say that you were along with Fillebrown and
737 MacMurdo and Jackson when they ran this level across the slough just south of Dover's? Where did they start from?

A—I forget the section. They started from near that hog camp of Harold's, Bob. Harold's; down there at the camp they tried to start on a section line.

Q—Who selected the point from which they started?

A—Harold showed them where he had seen the stake; he said it was burnt up. At that time Mr. Jackson was along with us.

Q—Did Mr. Jackson at that time point out to you where he had crossed some few days before?

738 A—I don't know that he did; he said he had crossed the swamp down there; I don't know exactly where he crossed; he spoke about having come across the country. I didn't pay much attention to what he was saying.

Q—Didn't he say he had crossed very near where you were crossing?

A—I don't remember that he did; I don't think he did. If he did, he didn't say it to me.

Q—Don't you know as a fact when you selected that place, you were selecting a point very near where he had crossed before?

739 A—If you want to know why we selected that place, we had a map that we ran by down there; we selected that place on account of having that map with us.

Q—What did you do on that trip, Mr. Dixon?

A—I kept charge of the revolutions of the wheel and stood on the drag some part of the time; I don't know precisely, sir, what is the circumference of the wheel; I know within a foot of the size of it.

Q—Do you know how many revolutions that wheel made for a hundred feet?

A—I know that they told me the number of revolutions that it made a mile; I didn't measure it, and I

740 don't know; I don't remember now who it was who told me; I don't know whether MacMurdo told me or not; I didn't see any one measure the wheel, nor did I measure it myself; I don't know as a fact how many revolutions that wheel made in a hundred feet when I was driving along there; I could not tell you.

Q—How did you know, then, when you had gone one hundred feet?

A—I knew when I had gone one hundred revolutions of the wheel; I marked it down; that is all that I knew about it.

Q—How could you tell when you had gone 100 feet,
741 then?

A—Well, when the wheel would turn around 100 times, after I had done it, I kept a tally of it; I gave them the different revolutions at the different stages, when they wanted it; I gave them the revolutions when ever we stopped; we would sometimes stop for lunch; sometimes stopped, and waited for them to come up.

Q—Did you give them the revolutions of the wheel at any other time?

A—No, sir.

Q—How many revolutions was it from the time you left this stake that Harold showed you until you got
742 over to where you stopped on the west side?

A—Sixteen tallies. That would be 1,600 revolutions.

Q—In going the whole distance?

A—No, sir; that was not the whole distance; that is where we stopped and waited for them; then I went off and found the section corner for them.

Q—That is, going to the point where you stopped running the levels?

A—No, sir; they didn't stop running the levels until they got out on the bank of the canal.

Q—Did you keep right along with them as they were leveling, or did you drive ahead?

743 A—I drove probably 100 or 200 yards ahead of them sometimes; Jackson was with me; he was driving; I was counting the revolutions of the wheel; sometimes I would stand on the drag to break the tules down; it did not interfere with the count at all; we had a boy along with us; he was doing nothing; there was no one else in the wagon.

Q—How could you tell in going across there when you made one hundred feet?

A—It didn't make any difference, I suppose; I kept the tally of the revolutions across.

744 Q—That is all; then there was no measurement, was there, of the one hundred feet—of each one hundred feet?

A—One hundred feet? We never put down the stakes at all.

Q—You did not?

A—No, sir; except the——

Q—(Int'g.) You did not measure the one hundred feet at all; each one hundred feet?

A—No, sir; I think not.

Q—You went right along with the wagon?

A—Yes, sir.

745 Q—There was no one else went along beside the wagon?

A—No, sir.

Q—How far were the levelers behind you?

A—Sometimes they would be 100 yards, sometimes 200, sometimes 300.

Q—How far were they behind when you reached the point that you stopped at?

A—I don't think they were over 400 yards behind; 3 or 4; a short distance; it was not but a short time before they came up to us. I don't remember now how many revolutions it was to that pond; I gave them the
746 number when they came up, the number of revolutions we had made to that pond.

Q—How did you get around that pond?

A—Drove around south.

Q—You didn't go around the north end of it?

A—Not at that time; no, sir. Around the south of it there were tules all around the pond; in some places they were pretty thick; in going around we took up the drag; there were tules all around the pond; they were not exactly where we drove, because we drove between the tules and the edge of the water.

747 Q—Then there were no tules where you drove at all?

A—Only in some places where we turned out to keep out of a little boggy place.

Q—When you started from the east side, in making that crossing, where did you make your first stop?

A—I could not tell you exactly; I stopped right along in front of them and waited for them to come up.

Q—How far did you go, after starting, before you stopped?

A—We were within a few hundred yards of that pond and we took lunch there; we stopped this side of it a

748 short distance, may be a half a mile or three-quarters, and took lunch.

Q—Didn't they come up with you at all from the time they started until they got to the lunching place?

A—Yes, sir, they did; we stopped and gave them water all along; kept the water in the wagon.

Q—Did you stop for any other purpose except to give them water from the wagon?

A—Yes, sir; we never tried to get too far away from them?

Q—When did you first give them the number of revolutions that the wheel had made?

749 A—When we stopped for lunch.

Q—Not before that?

A—No, sir; I may have done it; I would not be positive; if I did they noted it at the time.

Q—When did you give them the number of revolutions again?

A—I gave it to them when we got to the end; the tally that I had made.

Q—Who was with Macmurdo and Fillebrown, who were in the rear of you?

A—No one. In connection with that leveling, Mac-Murdo carried the rod and kept the notes; he had a

750 target rod; a New York leveling rod; Fillebrown ran the levels; he had the level.

Q—What was this rod that the other man had?

A—A surveyor's target rod.

Q—Did either of those persons have a chain?

A—Not that I know of.

Q—Did they have anything to measure the distance with?

A—They might have had a tape line; they might have had one in their pockets and I not know anything about it; I did not see them using any tape line.

Q—You were close to them at times?

751 A—Sometimes I was.

Q—Did you see anything to measure the distance with those people?

A—They had a rod; they could measure any distance they wanted to; I don't know anything about it; they could run the rod out to twelve feet; a regular leveling rod.

Q—What time did you start in the morning to make that trip?

A—I don't know; sometime after 9 o'clock; I could not tell what time it was when we got across; I know

752 that we were pretty late getting home that night; I don't know what time it was when we crossed the four mile stake; I could not tell; we got home between 8 and 9 o'clock.

Q—How long did it take you to drive from the opposite side to your home?

A—I could not tell you that either; I don't know what time it was when we struck the point on Sec. 12; it took us all day to get there and then get back home again; that is all I can tell about it; part of the way was a bad road, and we had to drive slow part of the time; we lunched somewhere in the vicinity of the
753 pond; after lunch we went on; it might have been a little after 3 or a little after 4 o'clock when we reached the other side; it was not 6 o'clock; I never looked at the time of day.

Q—Where did you go to that night?

A—Went up on the slough, up there at Wills; clear up to the high land; went back on the trail three or four miles from where we stopped surveying or leveling at the levee to where we went back that night. It was a very bad road and we had to drive slow a part of the way.

754 Q—You say you had been down through that country again on the eleventh of May. How far did you drive in on your direct line before you came to water?

A—Probably two or three hundred yards.

Q—Then how far did you drive in the water?

A—I didn't drive in it at all.

Q—I thought you said you drove in it, and found it miry, and backed out?

A—We just had the front feet of the horses in it.

Q—What is that?

A—Made the horses step into it with their front feet.

Q—How deep was it there where they stepped into
755 it?

A—I don't suppose it was half an inch deep. It was just spreading out along the edge of it. We didn't drive into it because it was boggy there.

Q—Did the horses bog down at all?

A—We didn't give them a chance to get clear down; we did not attempt to cross; we had wild horses in there. After that I went north around the water about three-quarters of a mile. We kept right along the edge of the water going north until we struck that high land; I believe it is called Broder Island; I don't know; there is a little cabin on it.

Q—You followed along the water until you came to
756 that island?

A—Yes, sir.

Q—How far?

A—We went down past the house; a little way beyond the house; I could not tell exactly how far; then turned back to the line.

Q—You went around the water about three-quarters of a mile, you say?

A—I went almost north three-quarters of a mile before we turned.

Q—When you made a turn to the west to get around
757 that water, how near were you to the water which was coming down?

A—We were not a great way from it; we were near enough to see it; we could see it most all the way around.

Q—Could you see it creeping along towards the north?

A—Yes, sir.

Q—Then, when you went back to the line, how far were you from where you had left it when you started?

A—It might have been a mile, or might have been a mile and a half; I could not tell.

758 Q—Then you were very nearly over to the slough when you came back or on the slough?

A—But a little way from it.

Q—Then you were very nearly over to the slough when you came back on to the line?

A—But a little way from it.

Q—After getting back on that line where did you go?

A—Went up to the pond; drove right around the pond.

Q—Which way?

A—Around the south side of the pond. Came around
759 and crossed right on to the line, and then went around the north end of the pond and came down to the line.

Q—How far north did you have to go to get around the north end of the pond?

A—I suppose it was 400 yards.

Q—You went clear around it?

A—Yes, sir. There was a little sink along there that was not as wide as the pond; we followed that and it gradually ran out.

Q—Where did you cross it in going around the water and sink?

A—Where did we cross it in getting around?

760 Q—Yes; when you went around the pond and then the sink, where you crossed from one side to the other.

A—I don't exactly understand your question.

Q—You went from this pond alongside of it, going north, did you?

A—Yes, sir; went along.

Q—Three or four hundred yards?

A—Yes, sir.

Q—Then what did you come to?

A—Came to the end of it.

Q—What was the nature of the country where you came to the end that you went around?

761 A—The tules were right across the whole end?

Q—Did you go around in them?

A—Yes, sir.

Q—And came up on the other side?

A—Yes, sir.

Q—Was there any depression at all where you crossed over to come on this side of it?

A—Very slight; I could hardly detect it.

Q—There was a slight depression there, though, was there?

A—Very little.

Q—Was there any tules growing in that depression?

762 A—Tules growing clear across.

Q—Where you crossed?

A—Yes, sir; almost on the same level as the rest of the swamp?

Q—Who was with you on that trip?

A—MacMurdo.

Q—You were with him and Mr. Fillebrown when he ran a line of levels, starting from the southeast corner of Section 28, in Township 29, Range 24?

A—Yes, sir; I was with him. We had the same wagon; I did the same thing in connection with the

763 revolution of the wheels—counted them. I don't know how far we went that time before we stopped; I could not tell. I kept a little ahead of the party; a little in advance of them. MacMurdo and Fillebrown were behind; I don't remember exactly the distance; it was before I came to this ridge that I drove over; it might have been a mile. I don't know how wide the ridge was; it might have been one hundred yards; I could not tell exactly; I never noticed it. It was a good deal higher than the country on each side of it, high enough for me to see over the tallest tules when I was on top of it; I drove right over it.

764 Q—Did Mr. Fillebrown and MacMurdo follow you right over that ridge, on their line?

A—Yes, sir; I think so. After I crossed that ridge I found a little pond backed up there.

Q—About 30 feet wide?

A—Yes, sir. After crossing that water 30 feet wide it was a very short distance before I struck water again, maybe two or three hundred yards; I don't know exactly.

Q—How far did you go after striking the water with the team?

A—I turned round and came back.

765 Q—Did you in going that distance with them in that buggy—did you keep right on one course all the time?

A—We did; didn't turn out of our course at all.

Q—Not in any instance?

A—No, sir.

Q—Did Fillebrown and MacMurdo follow along in your track all the way?

A—They did, sir. That was the object of traveling through there with the wagon, to break down the tules in order that they might see to level. We didn't leave that course from the time I went along with them until I left them.

766 Q—Didn't go round any impediments?

A—No, sir.

Q—Didn't turn out for tules?

A—Never turned out for anything.

Q—What time was it when you left in the morning on this second trip from Section 28?

A—I could not tell you what time it was in the morning; before noon. Then I came around and took them up in the evening on the other side.

Q—I understand you did not cross the water.

A—I didn't cross it. I don't know whether Fill-
767 ebrown and MacMurdo had anything to measure the distance with; any tape-line, or anything else. They might have had it. I was not with them when they went across by themselves.

Q—When did you first give them the number of revolutions made by the wheel on that trip?

A—Once or twice, maybe three times, before we got to that ridge. I could not be positive about it. I used a drag in that trip to break down the tules, the same as I have done before. Where the tules were high I broke them down.

Q—You say you crossed a pond where the water was

768 a foot and a half or two feet deep in going through, in making that second trip. Where was that pond?

A—I don't remember saying anything of the kind?

Q—Didn't you say you crossed it?

A—I don't remember it.

Q—Did you cross any pond at all on that trip from Section 28—the southeast corner of Section 28—until you reached the water, where you turned to go back?

A—I crossed that low place, 20 or 30 feet wide, that I told you about. I crossed along there. I did not go around any pond in making that trip.

Q—I want to return with you one moment to this
769 lake again, on the first leveling. Were you at the lake when Mr. Fillebrown was running levels around it?

A—I was with him a good many times. You will have to name the time.

Q—I mean the first time you were down there, in connection with the first level that was run across from the Harold House, and you came to a pond just about where you lunched. Did you remain at that pond? Were you there when Mr. Fillebrown and MacMurdo were running levels around the south end of the pond?

A—Yes, sir; I was across the pond. I remained there until they ran those levels around the south end.
770 I saw them doing it.

Q—How deep was the water when you drove across this pond the last time you were there, when the drag ran through there?

A—It came up to the horses' knees; it may be, a little bit over them. I don't think it came over them.

Q—How high was the bank on the west side of that water?

A—It was not very high. The buggy came down very nicely. We were going form west to east.

Q—Didn't the buggy drop down very quickly in going down there?
771

A—No, sir; not as quick as some places in the road.

Q—How high do you think that bank was above the water, on the west side?

A—It might have been a foot and a half; might have been a foot. I did not measure it, and cannot say.

Q—Does the Pioneer Canal run through the Buena Vista Ranch?

A—I think not. I don't think it runs into the ranch. It runs into some land that belongs to Mr. Haggin.

Q—Do you get any water from the Pioneer Canal on the ranch at all?

772 A—If they get any, they have gotten it in this year for the first time. I don't know. I have not been there much this year,

Q—Where does the water run to after it gets to the end of the Pioneer Canal?

A—Just runs down there on the land.

Q—Then where to?

A—It does not run anywhere; it is just standing there.

Q—Is the water running out from the end of the Pioneer Canal now—the lower end?

A—I don't think it is. I was down through there
773 the other day, and the water seemed to be standing.

Q—Don't the water run out of the lower end of that Pioneer Canal, and down against the East Side ditch or canal?

A—It might do it. I suppose if there were a good deal of water turned through it might go through beyond. I don't know.

Q—Haven't you seen it running there this year?

A—No, sir; I have not seen it running there. I have seen the water standing there. I don't know whether the water ran out of the canal or not. I could not tell you. There is culverts all along there.

774 Q—What time in March, 1877, was it, you crossed from the Buena Vista Ranch to the Lake Ranch?

A—About the 10th or 12th of March.

Q—How are you able to fix that date?

A—Because I was discharged by Mr. Fillebrown on the 13th. I had then taken my horse around, and I went across there. I had to go up to the Belle View to get a horse there.

Q—You say that you saw that cross channel running from the middle branch to the southern branch as early as 1877?

775 A—Yes, sir.

Q—How large was that cross channel when you first saw it?

A—About the same size as it is now.

Q—The first time you saw it, it was as large as it is now?

A—It might have been a little smaller; I didn't measure it.

Q—What proportion of the water ran in the middle branch at that time, when you first saw it?

A—Well, sir, unless in extreme high water, in the middle channel, I never saw water in it until 1878.

776 Q—What is that?

A—Unless there is very high water, no water runs in the middle channel as long as I have known it.

Q—When did you last see water in the middle channel?

A—I saw it there in 1878, in high water.

Q—It runs there in very high water, don't it.

A—In very high water.

Q—What is there put into the head of the Middle Fork, if anything to turn the water?

A—There is a dam put into that extreme South Fork up there. [Pointing on the map.]

777 Q—Isn't there a dam across the Middle Fork up there?

A—That dam is put there to fill the ditch.

Q—That dam is nearly across the head, isn't it?

A—I never saw one on that middle channel.

Q—You never saw a dam put across the middle channel?

A—No, sir. I never have.

Q—When were you there last?

A—You are speaking of this point here are you? [Referring to map.]

Q—No. I am speaking of that South Fork.

778 A—I have seen a dam put in there to turn water down to father's ditch here, in this extreme southern branch.

Mr. HAGGIN—The southern branch?

A—Yes, sir.

Mr. HOUGHTON—Have you seen a dam in that branch?

A—No, sir. You mean in Gage slough?

Q—No, sir. I mean in the middle channel?

A—I never saw a dam except in that southern branch. Father used to put a dam there, to turn the water in his ditch.

779 Q—You never saw a dam in that middle slough, just above your father's ditch?

A—He might have made a little sand dam, with scrapers, to catch what little water was running down in the river, after he made one in the southern branch?

Q—Is that all you saw?

A—That is all. If he had no dam at the southern branch, he would not have got any of that.

Q—Were there no stakes across that?

A—He might have had some stakes driven to hold the brush.

780 Q—When were you there last?

A—I was there this year.

Q—Havn't you seen stakes nearly across there this year?

A—No, sir. I couldn't tell you the exact dates, I was there this year. It was probably in March or April.

Q—You didn't see any obstructions at all across the Middle Fork?

A—No, sir. I might have seen some sand there. The water was pretty high. The water ran clear through. There might have been one or two stakes
781 there. I didn't notice.

Q—Didn't you see them nearly across the river?

A—No, sir. I did not.

Q—You were at work for Haggin & Carr, were you not?

A—No, sir.

Q—You are not?

A—No, sir. I am not working now for any one. I have not been at work for Mr. Haggin for the last two or three years.

Q—Havn't you been at work for them the last three or four years?

782 A—I worked for the State Engineer three years.

Q—Have you been in the State Engineer's Department the last year?

A—I was a part of last year. I was in 1879, and also during 1880. Not all the year. I was suspended for a month, or two or three months. I don't remember the exact date. I have not worked for Mr. Haggin since the 13th of March, 1877.

Q—You have been at work for Mr. Haggin in connection with this case, haven't you?

A—I have assisted in running the levels.

783 Q—You are the son of R. L. Dixon, who took the stand here?

A—I am.

Re-direct examination of

L. L. Dixon.

Mr. Haggin. Q—Mr. Dixon, you said you looked at a map—you had a map with you—when you went down there to make that cross-section to Section 12;

784 a copy of a map. Was it Map D? [showing Map D to witness].

A—It was a map very much like this, on a different kind of paper.

Q—You spoke about crossing some knolls or high points, or driving across them, on this last cross-section that you made?

A—Yes, sir.

Q—Did you take any measurements yourself?

A—No, sir.

Q—Any elevations?

A—No, sir.

785 Q—You don't know how high that was?

A—No, sir.

Q—It is mere guess-work?

A—That is all. I was up on the wagon-seat at that time, so that I could see.

Q—You also said that you kept the tally on both of those cross-sections. Did you not, as a fact, furnish Mr. MacMurdo with those tallies from time to time in going across?

A—Yes, sir; I gave them to him whenever he came up to me. I paid no attention to the number of times that I gave them to him.

786 Q—In starting from the Hog Camp on the first cross-section that you made, are you positive that you did not give any tallies of the revolutions you had made with the wheel until you got to the pond?

A—No, sir. If I said so, I did not intend to. I gave them to them at various times. I don't know exactly how many times I did give them to them.

Q—If you had made that statement——

A—I did not intend it. If I made it, I thought I had corrected it—if I did make it.

Q—You gave it to them several times, you said, whenever they called for it?

787 A—Whenever he called for it, or whenever I stopped and he came up. I don't know how many stoppages we made on the way across.

Re-cross-examination of

L. L. Dixon.

Mr. Houghton. Q—How many times, Mr. Dixon, do you suppose you gave them the tally in crossing that 4 miles?

788 A—I have no idea, sir. I stopped a great many times. I could not tell you how many times I gave Mr. MacMurdo the tally before we reached the pond.

Q—How many times, do you think? You have testified once that you did not give it to him until you reached the pond. Now, you think you did. How many times do you think you gave it to him before you reached the pond?

A—I don't know that I have testified to that.

Q—How many times did you give Mr. McMurdo the tally of that wheel before you reached the pond?

A—I could not tell you; I might have given it to
789 him 6 times. I might have given it to him a dozen times or 5 dozen.

Q—Couldn't you tell whether you gave it to him 5 times or a dozen times?

A—No, sir; I could not.

Q—Don't you know?

A—No, sir; I do not.

Q—Will you swear that you did or did not give it to him 5 times?

A—I would not swear to it, because I am not positive. I don't know how often I gave him that tally.

Q—You don't know anything about it?

790 A—No, sir; I kept the tally, and gave it to him whenever he came up. I could not tell you how often he came up.

Q—How far did you drive from the margin before he came up the first time?

A—I don't think it was more than a couple of hundred yards. I don't know how far it was after that before he came up the next time; I did not keep account of the different times.

Q—How far do you think?

A—Well, I don't know anything about it; I could
791 not remember; I never put it down; if I had been putting it down I could have known the number of times I gave it to him; but I didn't do it.

Q—You didn't put it down at all?

A—No, sir.

Q—How far did you drive at any one time without giving him the tally?

A—I could not tell you that; probably 3 or 4 hundred yards. I don't think that I drove over that; I was told not to keep too far ahead of them.

Q—You kept about that distance ahead of them all the time?

792 A—Not all the time; sometimes I was a great deal nearer to them. Sometimes I would have to get out of the way of the rod man.

Q—You don't know whether you gave them that tally 5 times or a dozen times, going across there?

A—I would not be positive about the number of times.

DANIEL WAGONER,

A witness called for defendant, being duly sworn, tes-
793 tified:

By Mr. FLOURNOY. Q—Where do you reside?

A—I reside on the north side, about 5 miles west of Bakersfield.

Q—On the north side of Kern River?

A—Yes, sir; I have lived there since 1875. I came here in September, 1875, and settled over there then.

Q—Do you know anything about the Calloway Canal?

A—Yes, sir; I know where it is located; its situation. I knew Mr. Calloway. I worked for Mr. Calloway on the canal; I worked there three months for
794 him.

Q—What months?

A—October, November and December, 1875.

Q—Was the work kept on during those months when you were there?

A—Yes, sir.

Q—What section did you live on?

A—Section 6.

Q—Have you ever lived on any other section?

A—I lived on Section 8, Township 29, Range 27, in January and February, 1877; part of the time I was
795 living on Section 8 and part of the time on Section 6; in 1876 I was living on Section 8.

Q—Did you see anything of the Calloway Canal in 1877?

A—Yes, sir,

Q—How often?

A—Every day. I saw teams at work. I saw one of the foremen on the canal.

Q—Was the work kept up continuously during 1876?

A—It was, sir; it was kept up continuously.

Q—In 1877 who was the foreman of the works? in the early part of 1877?

796 A—Mr. Seale. He boarded with me and Mr. Nelson. Mr. Nelson is my father-in-law.

Q—Boarded at your house?

A—Yes, sir; on Section 8.

Q—What months in 1877?

A—I think there were three or four months: Jan'y, Feb'y, March and April, I think.

Q—Did he board there all the time?

A—Yes, sir.

Q—Do you know whether or not the work was kept up during that time?

A—It was, sir; every day. I saw Mr. Seale every
797 night and morning as he went to his work, and as he returned. I saw the teams at work from my place. They were at work about two miles off to the southwest—almost due south.

Q—After Mr. Seale left, how was the work?

A—I could see the teams every day after Mr. Seale quit.

Q—During 1877?

A—Yes, sir. I had occasion to be about the canal very frequently. I was up and down the canal every few days hauling provisions from Bakersfield for Mr.
798 Broad, the other foreman who was at work on the canal, and Mr. Roberts.

Q—Could you see them in 1878?

A—I could not see them in 1878 that I know of, but I was down at the ditch every few days, and know they were at work. In 1878, whenever I was up there, the work was going on.

Q—How far had the work got out while you were working on the Calloway Canal?

A—I think it had got out—I could not say—a mile or two. They had got from the deep cut, or nearly that; not quite.

799 Q—Was there any work done beyond the deep cut?

A—No, sir; I think not; not very much.

Q—Not finished?

A—No, sir.

Cross-examination of

DANIEL WAGONER.

Mr. HOUGHTON. Q—When did you leave off work on that canal?

A—In December, 1875. I could not say exactly

800 how many men were at work at that time. I should think 40 or 50.

Q—When you quit in 1875?

A—Yes, sir.

Q—For Calloway?

A—Yes, sir. During the next month after I quit I think there were about as many men at work there. I was every day there and saw a great many teams; I think 20 teams.

Q—How long did that continue with that number of men?

A—I was never on the ditch but what I saw from 15
801 to 20 teams at work. I was there during all the time in 1876; I lived on the north side all the time, and in 1877, too.

Q—And they always had that number of teams there?

A—Yes, sir; I think so.

Q—When did Mr. Calloway leave there?

A—I think that he left in 1875 or '76.

Q—Did he leave before you did, or after?

A—He left before I did. I was on the ditch when Mr. Barker took charge of the ditch as superintendent. I didn't leave until after Mr. Calloway left.

802 Q—You think when Mr. Calloway left and when Barker took charge he had 40 teams?

A—I don't know that there were 40 teams there—20 or 30. I think likely there was 40 men there when Mr. Barker took charge; I never counted them.

Q—You were working right there?

A—Yes, sir; but then I never counted them. There was a large stable, and I think—

Q—[Interrupting] You didn't work for Mr. Barker then—did you work for Mr. Barker at all?

A—I worked some for Mr. Barker; I think Mr.
803 Barker was there five or six months as foreman. Mr. Seale came there in 1877, I think, in February.

Q—How much of a force did Mr. Seale have on that canal?

A—I think he had 15—12 or 15 teams there. I think he was there until April; I think he went away some time in April. After Mr. Seale left I could not be certain who took charge of the work, but I think Mr. Broad; Mr. Broad was there too with Mr. Barker in 1876; Mr. Chapman and Mr. Broad, both, I think.

Q—What Mr. Chapman was it that was on there in 1876?

804 A—Mr. Chapman that is down on the headquarter ranch, the Poso Ranch.

Q—And you say Mr. Broad was with Mr. Barker in 1876?

A—He was there; I don't know whether he worked there all the time or not. I think Mr. E. M. Roberts worked there in 1878; he is on the canal now.

Q—How far had that canal been constructed when you left it there at the end of 1875?

A—I should think, four or five miles—three or four miles—at the end of 1875.

Q—That would bring it out very near to where you
805 lived?

A—It would not bring it out that far. I was living on Section 8 then, on the northwest quarter.

Q—How near was it when you lived there in the fall or winter of 1876, 1875, to that point?

A—Well, I think it was about four or five miles out on the plains.

Q—About four miles from where you were?

A—No, sir; not that far from where I lived; from the deep cut or the Robb place. It was about two miles, I think, from where I lived. I think Calloway constructed about four miles of the canal before he
806 turned it over; may be more than that, during 1875.

Q—How far was that canal constructed at the end of 1876?

A—Well, I should think six or eight miles.

Q—When did you move on to Section 6.

A—I have been living there more or less ever since I have been out. I had taken up a soldier's homestead there. I think it was about 1877; the canal reached Section 6. It was after Mr. Seale quit. Mr. Seale was there the fore part of the summer. He quit the ditch I think, in 1877. It hadn't quite reached
807 Section 6 when he quit. I think it probably reached the north line of Section 6, about May, 1877. The teams were at work opposite my place I think, about May. At the end of 1877, it was out as far as Mr. Stoneman's I think, and Mr. Acres, about eight miles, eight or ten miles. I could not tell you exactly what sections they are on. I am not positive about the sections. They are on the opposite side of the canal from where I lived. West, or north-west from where I lived about two miles.

808 Re-direct examination of

DANIEL WAGONER.

Mr. FLOURNOY. Q—How far had the canal got, when you quit working for Calloway?

A—I think four or five miles, something near that. In December, 1875, it had got on to the Robb place. It hadn't got only just out of the cut, just a little out of the cut. It was not that far. No, sir, I could not say exactly how long the cut was. I should think two and a half or three miles long, It had got just
809 beyond the cut. I mean the deep cut at Robb's.

J. D. SCHUYLER.

Re-called for Defendants.

Mr. FLOURNOY. Q—Have you any acquaintance with Swamp Land District, No. 121?

A—I have some acquaintance with it, yes, sir.

Q—Have you ever been down there?

A—Yes, sir. I have been on the swamp land on
810 two different occasions. The first occasion was in crossing the swamp in 1879, in February. That was the occasion that I crossed it with Mr. Wible, that I spoke of the other day. The other occasion was April of this year. I was with Capt. Taylor, and in company with two other gentlemen.

Q—About what time in April?

A—On the 20th we started on that trip, going through the swamp, and got through on the 24th. We struck the swamp land district about Goose Lake. We followed along the border of the swamp, and went into the interior and to the Tule House, and traveled about
811 the swamp considerably. We went to the Tule House. I have no exact idea of just where the Tule House is, except that I have seen it located on the map. I think it is in Sec. 32. The Tule House is northwesterly of Goose Lake. We went there for a few moments the first time. We camped the first night on Goose Lake Slough, at lone tree. The second day we went past the Tule House by the lone tree. I mean the lone willow on Goose Lake Slough. We then went to the margin of Goose Lake. In going along from lone tree we followed along Goose Lake Slough a little way; it is rather a deep slough, perhaps 5 or 6 feet,

812 the banks on one side or the other, with standing pools of water in it. It is called Kern River Slough or Goose Lake Slough. It discharges into Goose Lake. Then we followed along the margin of the whole dry bed of Goose Lake. The road follows along the margin of the lake. From there we took a general northwesterly course, as I remember, along the margin of the swamp land, crossing a portion of it, and going into the interior of it to the Tule House. The Tule House is inside of the tules, although at the house itself there is high land on both sides. We crossed right by the Tule House, and went on
813 beyond it, and came back and camped in it that night.

Q—How far did you go beyond it that evening?

A—We took quite a circuitous course. We went down that slough that was there at the Tule House on the east side, and then returned to the Tule House for over night. Then we followed the slough up southward a mile or two, and then northwesterly to the western side of the swamp.

Q—In following it down, did you follow the margin of any slough?

A—Yes, sir. I don't think that slough is near the eastern margin of the swamp land. I followed the
814 slough along there—Captain Taylor and I on the west side, and Mr. James and Mr. Jackson in another wagon on the eastern side. We followed down on the western side of the slough until we reached a point where the slough joined another slough on the western side of the swamp, where the high land came in, northwest. We followed the meanderings of the slough which goes by the Tule House until we reached that point, and kept on the bank of that pond until we arrived at the western boundary of the swamp land district. There was a large channel at the Tule House. We crossed that near the Tule House, myself and Mr.
815 Taylor, and then kept on the margin of the slough until we got near the high land on the west side.

Q—Did you cross, or see any slough making into this near the margin of which you were passing?

A—Yes, sir. Near the Tule House there was a channel striking off to the northwestward. We saw no other channel after that.

Q—Did you meander along the course of this slough?

A—Yes, sir. I don't know what distance we followed it; but I think it was, perhaps, 3 miles; we followed it

816 until we came to the high land on the west side. We crossed no water. We saw water in pools all of the way along there. Where we saw the water was in this slough, in holes; no running water.

Q—As you approached the high land on the west of the swamp land district was there any change? You followed this slough up the margin of it. Did you make any connection—

A—[Interrupting.] Yes, sir; there was a direct connection with the deeper slough on the western side, which contained a deep body of still water. We could not see the bottom of it. That is the western slough
817 that this cross-slough connected with; the water in it appeared to be quite deep. We crossed around the head of the water in it, southward, crossing this cross-slough in the meantime.

Q—In passing on southward, did you cross any channel in connection with it, in passing around the southward?

A—Not what appeared to be a channel; no, sir; nothing resembling the sloughs we had just crossed.

Q—Did you get to the end of this deep slough that you speak of on the west side?

A—Yes, sir; we passed around the south end of it.
818 Then we followed north along that slough until we came to the end of the water that was in it, perhaps one and a half or two miles. The slough grew narrower and narrower as it came to the northern end, and it seemed to come to a point, or went out, and the bottom raised up to the level of the plain. Then we returned to the same point in the slough.

Q—You say the bottom of the slough spread and raised up to the general level of the surrounding country, at the north end of it?

A—Yes, sir; that was the end of it. It appeared to
819 be merely a sort of pond or reservoir, and not a continuous channel. Then we returned to the southern end of this water hole. We had gone completely around the northern end of it. We joined James and Jackson, who had gone to some corrals that were southwesterly from us, to look for some government corners which they claimed to know where they were, and we joined them at these corrals. I don't know what the corrals were called. There were two corrals there.

Q—Taking this course that you followed down some slough [referring to map] you don't know where you would strike the western side?

820 A—I do not. I should judge it was somewhat further south than this cross slough marked on the map. We followed about southwesterly in going along that cross slough. I have no data by which I can fix the location of the corrals I refer to. After passing the corrals, we followed along the swamp lands until we came to some lagoons or lakes, a couple of large lakes. Those corrals were on high land, near the margin of the swamp land, on the west side of it. Then from the corral we followed in a southerly direction until we came to some lakes or lagoons, I should judge a mile, or a mile and a half. They were full of water. They
821 were not connected. We then went easterly across the swamp to the east side. We were traveling a little south of east. It was generally a very smooth country with ponds, circular ponds like saucers, on either side. We saw several of these, some with water in them, some dry. We saw no connecting channels, and saw no channels. We went around the ponds, but did not cross them. There may have been places where the water would escape from one into the others, if they were full.

Q—Anything bearing the appearance of a channel?

A—What do you speak of as a channel?

822 Q—I mean a bed where a stream may be flowing, or where it may not be flowing, with sides, having margins, and a bed for the stream; where a stream has flowed or it is customary to flow.

A—We saw no such channel as that, nor anything to indicate it. There were indications of water having been all over the country, no one place indicating it much more than another. There were tules growing everywhere, which was an indication of water having been on the land; but there was no well-defined channel to indicate that the water had run to any special
823 place over the land, or that it had any accustomed place to flow. I saw no indications of that kind.

Q—Do you mean that to refer to the entire trip across the swamp land district at that time, that is, the trip which you speak of from west to east?

A—From west to east. On the eastern side there was a variety of channels. In going in one direction we would run into one; we backed out and went around the head of it; and then we went into another and went around that; and finally got to a place where we cut across entirely free, without going through one of these channels. That seemed to be the object, to find a

824 level place to cross through. They appeared to be not disconnected; they were like the branching fingers of a hand.

Q—Having no continuous channel through the swamp?

A—No, sir. They appeared to branch out from the same pond, running out; and we succeeded in getting around them. After going around on the east side, we went to the margin of the swamp land and the round corral, southward. Then we took a southwesterly course, with a view of going across the swamp again. We crossed a small channel that was dry, and went
825 into the swamp land west, and found running water, and we tried to get around it.

Q—How was that water running?

A—It was spread out over the tules. In places it had a defined direction. It was spreading out over the swamp country. We could not judge of the width of it at all. We did not cross it; we came right back again to the Round Corral. We found we could not get across on that line, and return. Then the two parties separated; there were two teams; Mr. James and Mr. Jackson in one, and myself and Capt. Taylor in the
826 other. Mr. James had his instrument with him, and took a due westerly course, and followed that to the township line south of that. Mr. Taylor and myself took the southerly course across Goose Lake to the township corner.

Q—About what point?

A—[Showing on the map]. It was this township corner. The corner of 27 South, Ranges 22 and 23 East, and 28 South, 22 and 23 East.

Q—On the township line?

A—We struck on this corner; that would be the southeast corner of T. 27, R. 22. Then I followed westerly,
827 all along the fence for two miles, until we came to the section corner. It was the southeast corner of Sec. 34, same township and range; from there we went in a southwest course, and struck the swamp land; I think about a half or three-quarters of a mile from the southeast corner of Section 34. We struck the eastern margin of the Swamp Land District. We attempted to get into the swamp and we found water, and followed along southward along the water. The water there was flowing, and was spreading over the country. It seemed to be flowing easterly, and a little southerly, and none of it was outside of the tules; it was in the tules. It

828 was on Sec. 3 that we touched the margin of the swamp land. It was a due southwesterly course, on the section corner of Sec. 3 that we struck the water spreading out about the centre of Sec. 3. I suppose we followed that water for about a mile and a half. We had no direct course. We were following around the ponds, keeping along the margin of the running water. We tried to keep on our southwest course, but were forced off of it by the water. Then we came to a point where we could go no further, and we camped for the night. It was about night when we got there, to this place where we could go no further in the direction we wanted to
829 go, on account of the water; and then there was a body of high land there, and we camped on it for the night. I should judge that was on Sec. 10, T. 28, R. 22, and we camped near the margin of the water. Two of the party the next day waded across the water to the western side of the swamp land. I did not go across. I had gone a part of the way across the previous evening, and returned without going all the way across. There was a little water to the east of us. We had crossed a trickling stream of water in getting to this point. Two of the parties went across the water to the west side and returned to camp. After they re-
830 turned, we went back nearly in the same direction that we had come, to the section corner that I have previously spoken of, on the township line along the fence. Then I went south, a mile I think, on the section line, until we came to the section corner. There we found the section corner, and we took a bearing southeast and went diagonally across two sections, where we came to the township line. There we found the section corner. Then we followed down the township line one mile and took a southwesterly course diagonally across two sections, until we came to the south line of the
831 township at the 7th standard.

Q—At what point was that?

A—We returned to the southwest corner of Sec. 34, on the line between 3 and 2, just one mile southeast, and crossed 11 and 13, to the southwest corner of 13, Township 28, R. 22, south one mile on the range line, southwest across 25 and 35, T. 28, R. 22, to the southeast corner of Sec. 34, T. 28, R. 22. We crossed the swamp land district on to the high land on the west side, from the east to the west. It is almost a due southwest course. We struck the section corner on the other side.

832 Q—What was the topography of the country in making that trip?

A—It was comparatively level.

Q—Did you see any water there?

A—No, sir. We saw standing water at one place.

Q—Where was that—about what part of the swamp land district?

A—That was very near the southwest corner of the first section we crossed; Sec. 25, near the southwest corner of the section. I had been calculating the distance across, and saw that we had 500 feet yet to go before we came to the corner, when we came to a
833 slough or lagoon.

Q—What did you do when you got to the bank of that lagoon?

A—It was about dinner time, and we stopped for lunch. The water we saw there was in this slough that you speak of.

Q—What was the size of it?

A—It was standing water at the point we struck it; about 25 feet wide, I estimated it.

Q—Do you know the length of it?

A—We went around both ends of it; it was about a half or three-quarters of a mile.

834 Q—You went around both ends?

A—Yes, sir.

Q—Did it have any inlet or outlet to it in the way of a channel?

A—No, sir; we saw none. It was flat land directly up to the beginning of the cut. The cut was commenced in a fine point, like. There seemed to be a cut at each end, and it was gradually widened until we got to the centre, where it was widest and deepest. At the lower end it would be narrowed up to a small point again, the bottom coming up even to the general
835 level of the country. The cut seemed to be a sort of gully in the land—a cut into the slough. You could hardly tell just where the end was. It grew out into nothing, and into flat land on both sides, and broke off into level country on each end. We crossed no channel between where we entered the swamp land on the east side and this place where we lunched. There were some very flat depressions in there. On the range line we crossed there, it appeared as though there had been water there, I judged from the dead tules that were there growing.

Q—Were there any indications of a channel?

836 A—Bearing indications of the presence of water, I could not judge that there had been running water there though.

Q—They did not indicate that a stream had ever run there?

A—No great sized stream, if any at all.

Q—Had it defined margins, or a bed?

A—I could only judge of these depressions by the tules growing in them; not by any difference in the elevation of the ground. I did not consider it any defined channel. We lunched at this pool of water as I call it. After passing around on both sides, we con-
837 tinued on in a south-westerly course until we came to a section corner on the township line. We crossed the entire swamp land district, and came to high land on the bank of the canal, on the west side. From the point where we lunched to the western margin of the land, there was nothing striking to attract attention; flat tule land covered with tules. We saw no water, and saw no channel, no dry channel. I could not see that there was any place lower than the other. It was all flat land. After we reached the bank of the canal on the west side, we went back to the section corner. Then we went south-easterly from Section 34, and passed Do-
838 ver's place. We went through to Dover's camp, and to a point that we supposed was the south-east corner of the S. E. quarter of the N. W. quarter of Section 12, T. 29, R. 22. That would be the centre of Section 12. From there we took a due easterly course across the swamp land. Going across there we found a broad expanse of tules and an occasional patch of wire grass, or salt grass.

Q.—Did you find any water?

A—We saw only one or two pools of water, basins like or ponds.

839 Q—Any connection between them?

A—No, sir; the water was very low, just a few inches standing in the bottom of the ponds. I did not cross them. Our course took us past them. We did not have to go around them. There was no slough or channel that we crossed going through there. There was a slight depression on the eastern side that was, perhaps, a foot deeper than the general level of the country—a slight depression. We went where we could look around the southern end of it, however. I observed that it ran out at the southern end. That is the only semblance of a slough that we saw, and that

840 appeared to expire at the southern end. It was perfectly flat. After that we passed along the margin of the swamp land to De Webber's, and camped for the night The following day returned to Buena Vista Ranch.

Q—I will ask you now whether there is a continuous defined channel through that swamp land district?

Question objected to by plaintiffs—first, on the ground that it is leading; also upon the ground that it is putting to the expert the very question to be decided by the Court.

Objection overruled. Plaintiffs except.

841 The WITNESS—I can only speak of what I saw in the places I have been, and at one or two of the crossings, perhaps three, that I made in the swamp. I saw nothing that would indicate a channel.

Cross-Examination of

J. D. SCHUYLER.

Mr. HOUGHTON. Q—This slough which you found at the Tule House, how wide was it at that point?

A—It was 250 feet, I judge, at that particular point. It was, perhaps, six or seven feet deep to the level of the

842 water, and there seemed to be quite a depth of water in the slough. We went about a half a mile north on that slough, and then crossed; and then continued on the western side until we got to the end of the water, and to the end of the slough.

Q—Then, after going back to the Tule House, how far did you follow that Tule House channel going south?

A—Perhaps two miles; two or three miles.

Q—How long did you follow along that slough, before you crossed it on the west side?

A—We followed on until we came to deep water on

843 the western side, where there was deep standing water in a pool on the west side. We made a crossing of the Tule House Slough to the west side below the Tule House; two miles below, south of the Tule House. Then we followed that slough to the western side of the swamp land, where we found this deeper slough.

Q—Can you tell me on this map, about where that would have brought you out on the west side?

A—We were going in a very irregular course there, and I took no note of the distance, and I can only guess at it. It appears as though this pencil line on the map between Section 32 and the Tule House, and Sec. 1, T.

844 26 S., R. 21 E., was intended for the channel. But it seems to me it must be further south than that. I think it must be through Sec. 7, and into Sec. 12, probably. I should judge we followed along Sec. 7, and then crossed into Sec. 12, and there we found the deeper channel, and we followed that north some distance. The next crossing we made of the swamp land, was from west to east, south of the lagoons, and south of the two corrals that I speak of. I think we started from about Sec. 25, T. 26, R. 21. From there, I think we went south 78½ degrees east, which brought us out on Sec. 33, T. 26, R. 22, somewhere about the south half of the section, I judge. Going across
845 there, we found a broad stretch of tule land, and on this side there were two or three standing pools of water. There were depressions between those ponds where some water might run. Only one pond was full.

Q—Would the water run through these depressions if the water overflowed the general country?

A—Possibly it would; very likely it would.

Q—What did you find on Section 33, when you came to it in crossing, on the extreme eastern side?

A—We found these branching channels that I spoke of, bordered with thistles, and smartweed growing on the
846 bottom. Some of them were 20 feet wide and one foot deep. There were several of them. They were of various widths, from 20 to 25 feet wide and a foot deep; tules and smartweed growing in the bottom; but there was no water in them. It was nearly a mile and a half from the point where we got across to the Round Corral; a mile and a quarter and five chains, I think. We went from there in a southeasterly direction to the corner of the township, going across by Goose Lake up to the high land at the corner of the fence. Then I went west two miles, and afterwards southeast about half or three-quarters of a mile, until we came to running water in a pond. A
847 portion of it was running east, and a little of it was running back southwest, following up some ponds that were there. There were several large ponds on Section 3, at that point, right along the line there. The ponds were following along in a southerly direction, one after the other, apparently. The last pond we saw was not quite full, but a little water was running into it, and we crossed that water and came south of it, until we came to more water on Section 10. The channel we went across between the ponds was two feet wide and a couple of inches deep, where water was running into it. That was

848 all the channel I saw. If there had been more water it would have been wider. There was but little water there.

Q—How wide was the channel?

A—Itself? That was all the channel I saw. If there had been more water, it would have been wider. There was very little water there.

Q—I didn't ask you how wide the water was, but how wide the top of the channel was?

A—That was the only guide that I had.

Q—Couldn't you tell by looking at the surrounding country, or tell whether it was generally high?

849 A—No, sir; nothing to indicate it.

Q—Do you mean to say that in crossing that swamp land at all, you could not tell by looking at the country whether there was a channel at all without the aid of water?

A—Where there was a channel I could tell.

Q—How much water would that channel carry before it would overflow its banks?

A—If it was all level land, I could tell more about where there was any channel. If I had added another inch of water it would have gone further onto the land. At

850 this particular point, where it was running into the lakes, there was quite a little fall, perhaps a foot of fall. If you had added another foot of water to that channel, I think it would have covered the whole country there; it would have filled all the ponds and spread back considerably. We then continued on further into the swamp, and camped for the night. That night I waded in. I thought I could get in without wetting my boots, as there was but little water in there, and I went in quite a ways till I got my feet wet, and then I went on. I suppose I went a half-a-mile. The water was about half way up to my knees; at no point deeper than that. There was a current

851 there, and the water was running northerly, I did not cross with the parties the next day. After they came back we went to the northeast corner of Section 24, Township 28, Range 22, and then south to the northeast corner of Section 25, Township 28, Range 22. From there we went diagonally across Section 25 and 35, to the southeast corner of Section 34.

Q—You say that after going some distance there, you found a slough?

A—Yes, sir.

Q—How far was that?

852 A—6,900 feet from that corner. I measured the distance by the revolutions of the wheel. The water was not running in that slough. There was a little water standing in the bottom of it. There was nothing in it where we crossed it. The slough where I crossed it was perhaps two and a half or three feet deep, and 25 feet wide, I think. I crossed it on foot there, and we went around it with the teams. We went around it first on the south side, and then came back around it on the north

Q—How far did you go south before you got around it?

A—Probably 1,500 or 2,000 feet,

Q—How far did you go north?

853 A—I did not keep any reckoning of the distance. I should judge about the same distance; perhaps 3,000 feet; that would be about one mile the two ways; a little less than a mile.

Q—How wide would that slough average through that mile?

A—The places where we struck it, it was the widest place, I think. After passing that place we found a broad belt of tules. We found no other depressions at all. We kept on the same line that we had been going before We found no depression on the west side that we could

854 perceive with the eye. We might have found something with an instrument. We did not run levels across there, the tules we went through there were up to the wagon wheels. The next place we went across the slough, was from a point on a line running east and west from the center, and about a quarter of a mile east of the center of Section 12, above Dover's. We then took an easterly course across the swamp. Going across there, we came to ponds of water. There were two on one side, I think, and one on the other. We drove within fifty feet of the margin of these ponds. Going across, we followed the direct course as near as we could. Occasionally we would

855 have to go to one side for an extraordinary heavy bunch of tules. We did not go to one side at all to get around any of these ponds. Captain Taylor was with me on that trip, and Mr. Jackson and Mr. James were following along after us, I think in the same path. I did not notice their course, but I think they followed in our direction. I think two of the ponds were on the south side and one on the north side. They were like saucers. Two of them were of that shape. One of them was elongated like a sweet potato; I don't recollect how long, perhaps 500 feet. I paid no special attention to the depth or length

856 of it, but it was longer than wide, much longer. Perhaps that was half way across. We were on the south side of it as we went over. I did not go to that pond or channel. We were probably 150 feet from it, and drove right along near it. I paid no special attention to its general course, but I think it was east and west or thereabouts. I noticed no depression at all in making that crossing, no depression at all where water would run, except the one I have spoken of on the eastern side. It would be very hard to tell how wide that depression was. There was nothing
857 there to define the limits of it. The limits would depend altogether on the elevation above the bottom. As I recollect, it would be a foot or a foot and a half deep below the surrounding land.

Q—How far apart were the banks?

A—I saw no banks.

Q—How far beyond was the surrounding land that would give the depth of a foot there?

A—That would depend on the slope of the land towards the center of the depression. I don't know that.

Q—You say there was a depression of one foot deep. To put a foot of water in there how much land would
858 it spread over?

A—I could only guess at it. I should say, perhaps, 100 feet. There were tules in that depression not quite as thick as in the surrounding country, but heavier and higher. The tules were higher at that point than any other.

Q—You think then, in driving across a piece of country in that way, that if there was a depression a foot deep, which was 100 feet wide, you would notice it?

A—You forced me to guess the width and depth. I can only form a judgment.

Q—You stated that that there is a depression there
859 one foot deep. And I ask you, if, in going across swamp land like that, there is a depression of 100 feet wide and one foot deep, you would notice it in going across the country?

A—I noticed it because it came to a sharp point at the bottom, and it was there a thread through it like the bottom of a ploughed furrow.

Q—Do you know where this water came into the body of swamp land or into the slough there that you saw running down northward?

A—At what point?

860 Q—Do you know at what point that was turned into this body of swamp land?

A—We saw a break in the bank of the canal, and supposed that it was about west of where we were. We did not see it directly coming out of the canal. That was west of us when we were on Section 10, where Mr. James and Taylor waded across the swamp. It would be about west of that point.

Q—What was the lowest or most northern point that you found running water?

A—My impression is that we saw the banks of the water on this crossing through from the ponds on 25,
861 to the high lands north of the Round Corral. I think that was the end of the water there. But we saw it near the middle of the swamp, perhaps on Secs. 31 and 32, Township 26 South, Range 22 East.

Q—You think you saw the end of the water there?

A—Yes, sir; that is about 9 miles in a straight line from the point where it came out of the canal.

Q—How rapidly will water run in a channel when the fall is two feet to the mile?

A—That will depend a great deal on the depth of the channel and the width of it, and the volume of
862 water running in it.

Q—How fast will it run in a clean cut channel, say like the Calloway Canal?

A—If you would give me some exact data, I will make the calculation.

Q—I suppose there is some rule as to a canal 60 feet feet wide and with 2 feet fall to the mile, with a clear channel. What are the extremes?

A—$2\frac{1}{2}$ or 3 feet to the second is the velocity ordinarily found in canals about here.

Q—What difference would it make if you put that same body of water in a channel like that delineated
863 on that map?

A—If you put it into a crooked channel, it has less velocity naturally; but varies constantly with the volume that it carries. If there is any fall at all in the channel, there is a perceptible current. If there was a fall of two feet to the mile, in such a crooked channel the velocity would be governed largely by the condition of the bottom. If it was filled with grass, weeds and tules, or anything of that sort, it would be very much retarded. It would also be governed by the fact as to

whether it was the same width at all points, or shallow at certain points.

Q—You have testified as to the channel between Kern and Buena Vista Lakes; and that the channel between those lakes in the centre was 16½ feet deep where you went through there?

A—Yes, sir; fifteen feet was the deepest sounding.

Q—And where the channel approached the lakes it was only three or four feet deep?

A—Yes, sir.

Q—Isn't that the character of the channel at any point where you run water from one body to another? It is shallow where it leaves the lakes, and deep in the centre?

A—Shoaling would be caused by some local action, I should suppose. The shoaling would be caused by some local action. The size of the channel is governed altogether by the volume of water and the grade.

Q—Then there would be no difference in your judgment in the channel on the same grade between two lakes; say they were one mile apart, at the centre, than there would be at each point near the lake?

A—I know of no general law that would necessitate the channel being deeper at the centre than at either side.

Re-Direct Examination of

J. D. Schuyler

Q—You spoke of noticing water when you went into Sec. 10, having some current moving northward. What kind of a grade was that at Section 10 or about Section 10?

A—It was west of Sec. 10, as far as I could———

Q—What kind of a current?

A—It was a moderately good current; perhaps some foot a second or foot and a half, possibly.

Q—Was the current generally over the deep and shallow water just the same, or was there any difference?

A—There was a little current, in some of the deep water, there was no current.

Q—No distinct difference between them in that respect?

A—Generally the current was in deeper water.

868 WALTER JAMES,

Recalled for defendant.

Mr. HAGGIN. Q—Do you know anything of the Calloway Canal?

A—Yes, sir. I first saw the Calloway Canal in 1875; I think about July. I then saw the camp and the men working on the canal, in its construction. That was near the point where the canal was taken from the McCaffrey Slough. They were at that time working in heavy cutting in what was known as the cut. At that
869 time there was ten or twelve teams; some four-horse teams and some two-horse teams. That was about July, 1875. I saw it at different times through the summer of 1875, and I was on the canal in the early part of December, 1875. When I saw it at different times during the summer they were at work on it. I never saw it when they were not at work on it. It was about the 8th or 9th of December when I saw the canal. I went there several times to see the excavator that I had been talking with Mr. Calloway about, to see it work. They then had about the same force as
870 when I first saw it, and perhaps a few more teams. I was acquainted with Mr. Calloway at that time. I think at that time there was a little larger force than when I first saw them, or at any previous time. At that time the work was being done, I should say, about a mile and a half below the cut of the McCaffrey Slough. The canal at that point was 60 feet wide on the bottom. In the cut it was very deep. Out of the cut they were making about five feet from the bottom of the grade to the top of the bank. I saw Mr Calloway there in December, 1875, on the canal; also in the early part of January, 1876. He then had his force
871 there, about the same number as before, and they were working on the canal. I think then it was partially constructed as far as Section 20, Township 29, Range 27. I was again out there in January, in the early part, when Mr. Calloway turned the force over to Mr. Barker; the scrapers, excavators. I don't remember how many horses; all of the outfit that belonged to the canal. The force was at work at that time. They continued working there. Mr. Calloway remained there some time settling affairs with the men. Mr. Barker began work while Mr. Calloway was still there.

872 There was no cessation of work between the two men. Mr. Calloway, Mr. Barker and myself went out and went over the route of the canal, and made some preliminary surveys on the route. We went out through to Poso Creek, and beyond Poso Creek, making preliminary surveys. That wasin January, 1876. I wentthere to see Mr. Barker a great many times in 1876, to give him directions about the work. The work progressed all the time during 1876. My recollection is that I was not there a great many times during 1877. I think some other person
873 made the surveys for that year. I saw work on the Calloway several times in 1878, but I don't think I was there very often. My recollection is that I set some grade stakes for the force once or twice in 1878, but I don't remember. In 1877 and 1878 I was not out there often. I was never out there when the work was not going on. In 1879 I was several times on the Calloway. When I did see the canal in 1877 and 1878 the progress had been made upon it, and I saw what work had been done, and I always saw the men and force at work. I could see that the work had progressed since the previous time that I saw it. In 1879 I several
874 times saw the teams on the canal, and noticed its progress.

FRIDAY, MAY 20, 1881.

Direct Examination of

WALTER JAMES,

(Continued.)

I saw the Calloway canal several times in 1880. In 1880 it was constructed to Poso Creek. I think in 1880
875 it was extended across Poso Creek. I have seen the canal this year, 1881, about Poso Creek; but I have not been to the end of the construction. I have been along the canal, over the entire route, from its head to Poso Creek. The canal from the head-gate, above the railroad bridge, is constructed through the McCaffrey slough, from a point in Sec. 22, T. 29, R. 27. That portion of the canal is 120 feet wide. The McCaffrey slough is not in its natural condition now. Wherever the canal is constructed in the slough, the slough is enlarged, widened and banks made to it, and at some points on the slough the canal is taken

876 across a bend, and in one instance it runs out on to high ground; the slough is straightened.

Q—That slough heads on Kern River, I believe?

A—Yes, sir. From the head of that slough, just above the railroad bridge, down to where the canal proper is taken out it is 120 feet wide on the bottom. From the point where the canal leaves the old slough it is 60 feet wide on the bottom, and continues 60 feet in width for 2 or 3 miles. I don't remember the exact point where the 60 feet width ends. From the end of this 60 feet bottom width portion of the canal to Poso Creek, it is 80 feet
877 wide on the bottom, all of the way to Poso Creek. At the head of the canal proper there is a weir constructed in the slough, and a head-gate in the canal. The weir is for the purpose of passing the water from the slough into the canal at that point, and for the purpose of allowing any excess of water to be carried past that is not used in the canal. The head-gate is just where the canal leaves the McCaffrey slough; it is for the purpose of regulating the flow of water in the canal. I have known water to be turned into the slough portion of the canal which was not run on down the canal but through the weir and down into the river again.

878 Q—Then, after it goes through the weir into the slough, it returns to the river, does it?

A—Yes, sir. The slough empties into the river at about Section 33, Township 29, Range 27. I saw that slough before the canal was commenced, with water in it. It was a natural slough.

Q—Did the water flow in there naturally or not?

A—It flowed through there at any time of high water. There was a small amount of water running through this slough at periods of low water. I think the 60 feet width terminates on Section 20, Township 29, Range 27. On or about that section. There are
879 branches or lateral ditches running from the Calloway; I don't know how many; I think there are something over 60. The grade of that canal, the first portion of it, is .8 of a foot per mile; a portion of it .6 of a foot per mile. By the first portion, I mean from the McCaffrey Slough and down for five miles. I think the grade runs .08 to the mile. Beyond there a portion of it is .06 to the mile, and there is a portion of it .04 to the mile. A portion running through McCaffrey's Slough has a grade of four or five feet to the mile; I don't remember exactly. The lateral ditches are con-

880 structed usually at about right angles to the canal, varying from 12 to 16 feet on the bottom. I don't know the aggregate number of miles of these side ditches in length. I know of irrigation going on from that canal, and generally I know the land irrigated from the canal. I have been pretty generally over the irrigated portion. There is at present, approximately, 13,000 acres irrigated this year, in cultivation. I knew that land which is now being irrigated by the canal prior to the construction of the canal. There was none cultivated there. Previous to the construction of the
881 canal there was no portion of that cultivated beyond three or four miles from the river. This 13,000 acres is ploughed, checked, seeded, harrowed and irrigated. It is planted mostly to grain; some alfalfa, some fruit trees and some shade trees; and it is all irrigated. There is no other means of irrigating except from the Calloway Canal.

Q—Do you know the water it requires per acre to irrigate the land you have spoken of, of course approximately?

A—Well, approximately, a cubic foot per second would irrigate 100 acres during the irrigating season,
882 a period of 60 days. There is a great deal more water required the first irrigating season that at any subsequent time, the ground being very dry, having no moisture at all for a great depth, and it takes up the water. It is also very full of holes made by gophers, mice and insects. It takes the water up at the first irrigation. The first irrigation makes the land closer, and a portion of the water remains some time—a year or two. There is in most places, if not all, through that country a clay subsoil that is very close, at a depth of three to four feet below the surface. It
883 has a tendency to hold the water, to prevent it from flowing off and being absorbed by the country below, and being once irrigated it retains the moisture for two or three years, and the following year it does not require so much water. Seventy thousand acres, approximately, can be irrigated from that canal. That land, a portion of it, produces very fair crops when properly irrigated—25 to 30 bushels of wheat, 30 or 40 bushels of barley, per acre.

Q—How is it for other products you have mentioned?

884 [The question is objected to by plaintiffs, on the ground that it is irrelevant and immaterial.]

[The objection is overruled, the plaintiffs except.]

A—The production of alfalfa is quite good. It is as great in quantity as any lands in the island during the period that it is irrigated. Up to this time, there has never been any alfalfa irrigated, except in time of high water, when the water was plentiful in the canal. Fruit trees grow very well.

Q—What would be the effect on these crops, of whatever sort they may be on these lands, if you ceased
885 putting water upon them?

[Objected to by plaintiffs, on the ground that it is irrelevant and immaterial.]

[Objection overruled. Plaintiffs except.]

A—The crops, or whatever might be growing in that country, would most certainly perish were it not for irrigation.

Q—Do you know, Mr. James, approximately, the cost of that canal?

[Objected to by plaintiffs, on the ground that it is irrelevant and immaterial.]

[Objection overruled. Plaintiffs except.]

886 The WITNESS—Yes, sir; the canal cost approximately, $102,000. I refer to the main canal. That is exclusive of the lateral ditches, the branch ditches. I don't know what they cost. I could not approximate it, because there has been some 30 or 40 miles of lateral ditches constructed since I knew anything about it. I think prior to 1881, there was about 40 miles of branch ditches from 12 to 16 feet wide, and something like 30 miles since constructed, but I don't remember. Prior to 1881, I think, about 40 miles. I think the cost of construction of that 40 miles would be about eight or
887 ten thousand dollars.

Q—Do you know what was done in the way of those lateral ditches upon the canal up to 1st of May, 1879?

A—No, sir. I could not give an approximate idea as to the amount expended on those canals and ditches prior to the 1st of May, 1879. The cost of the branch ditches, would depend very much upon the fall of the country, which governs the numbers of weirs required. I have no figures on that whatever. I had nothing to do with their construction; that is, of the branch ditches. I had something to do with the construction of the main canal. To the best of my knowledge, all

888 the water that flows in that canal, is used on the land. I know the Kern Island Irrigating Canal. I first saw it in 1871, that portion that runs to the mill, which is known as the Mill Canal. That was about the same size then, if I recollect right, as it is now. I saw it in 1872 and in 1873; and saw water in it in 1871–'72 and '73; I have also seen it of later years, and I have seen it in 1880 and 1881. It always seemed to have the same amount of water since I first knew it. The only portion I knew in early years, was that at the mill. I know the Beardsley Canal. I first knew that in 1874;
889 there was water in it that year. I think that they were irrigating from that canal in 1874; but I don't remember. I knew it in 1875 and 1876; and I know it at the present time. The water has been used for irrigating from that canal, every year since 1874. In the year 1880, I think 1,200 acres, approxmiately, were irrigated from that canal. That canal is 20 feet wide on the bottom. The upper portion of it for some distance, carries some three feet of water. There is one branch of the canal. I know the McCord canal. First saw it in 1875. I think there was water in a portion of it in 1875. I don't know where that water was used for
890 irrigating. The water on the Beardsley Canal has been used every year for irrigating. I know the Farmers' Canal. First knew the Farmers' Canal in April, 1873. It was not constructed then. I saw the notice of location posted up at the head of the canal in April, 1873, and there were some men then at work. I made a survey at that time from the river to the Cotton Ranch Slough, or the Skyle's Slough. I know they continued to work 'till the canal was made from the river to this slough.

The plaintiffs object to the introduction of any evi-
891 dence as to the Farmers' Canal, on the ground that it is not admissible under the pleadings, in addition to the objections they have made.

[Objection overruled. Plaintiffs except.]

The WITNESS—That portion was completed in 1873, in the summer; I don't remember the date I saw that notice, but it was in the early part of April. I think that canal is 30 feet wide on the bottom, and it was constructed to carry three feet in depth of water. I don't remember the grade. It was a very great fall from the river to the slough, something like 15 feet to the mile; a very steep grade. The notice I saw was

892 posted at the head of the canal, on the bank of the river. I do not remember the contents of that notice, or anything in it. I think I remember some of the names. I don't remember how many names there were on it. I suppose there were a dozen or fifteen names, but I don't know how many. I remember O. P. Ormsby, Mr. Robb, Mr. Stockton, Mr. Carlock, Mr. Randall and Mr. Ober. I think Ober was one of the locators; I don't remember positively. I didn't take any particular notice of the names signed. I only remember that it was a notice of the appropriation of the
893 water. I think the amount of water appropriated was 100 feet, under a four-inch pressure; and it was stated to be the intention of the appropriators to run the water down through Panama Slough, or Skyle's Slough, and use this natural channel as a water-way.

Q—You say 100 feet, under a four-inch pressure. What would that be, Mr. James, in inches, "under a four-inch pressure?"

[Objected to by plaintiffs, on the ground that it is irrelevant and immaterial.]

[Objection overruled. Plaintiffs except.]

Mr. HAGGIN—What would that be in inches, under a
894 four-inch pressure? What do you understand it to mean?

A—To mean the water that would flow through an aperture of an area of 144 inches for one foot of water, with this water under a pressure of four inches.

Q—Through an aperture of 144 inches?

A—144 inches for each foot—each foot of water; the amount of water that would flow through an aperture having a square area of 144 inches.

Q—If the notice stated 100 feet of water it would be 100 times that?

A—100 times 144 inches would be the area of the
895 opening through which the water would flow.

The COURT—You speak of a four-inch pressure. Do you mean the height of the water above the top of the orifice through which the water runs was four inches? That the surface of the water would be four inches higher than the top of the orifice through which the water pours?

A—The rule of miners' measurement is to measure the pressure from the center of the orifice to the surface of the water. But the orifice employed in the miners' measurement is two inches vertical, and gives

896 an inch to every half-inch in the length of the orifice. A person specifying the number of feet of water under a four-inch pressure, evidently aiming to describe the quantity of water in miners' inches, would employ an orifice only having a vertical height of two inches, which would require an impossible width of head-gate to admit the water.

The COURT—Do I understand it is your idea of these matters, speaking of this pressure of water, that they use miners' measurement; that miners' measurement is generally used?

897 A—Well, I would infer that 100 feet would mean, as I say, the water passing through an opening having an area equal to 100 square feet, and when they say, in connection with that, under a four-inch pressure, it would mean that the pressure would be four inches above the opening of the orifice through which the water flows; that is, from the top of the orifice to the surface of the water. I don't know anything else that a man could mean by saying under a four-inch pressure, after specifying the area of the opening through which the water should flow. I saw water in the Farmers' Canal in 1873; I think it was late in the

898 year that I saw water in the canal. The water, after being turned into Skyles' Slough, goes down into the Panama Slough, and is taken out at different points along the slough by side ditches. Skyles' Slough and Panama Slough are the same. The water, when taken out, is used for irrigating. I have known that canal since 1873, every year.

Q—Have you known water in it every year?

A—Yes, sir; and the water has always been used for irrigating. It irrigates crops of all kinds—wheat, barley, corn and potatoes.

899 Q—Whereabouts, generally, is that water used for irrigation; what distance; what portion of the country?

Mr. HOUGHTON—I understand the Court that this goes in subject to our objection; that there is no occasion to repeat our objection as to all the canals?

The COURT—It is so considered.

The WITNESS—The water from the Farmers Canal, is used in Townships 30 and 31 South, Range 27 East. Portions of the townships both east and west from the Stine Canal—by the Stine Canal, I do not mean Old River. I know all the land irrigated from the Farmers' Canal, but I don't know as I can give the acre-

900 age. I could tell the land I know of being irrigated from the Farmers' Canal by referring to the map.

Q—Well, sir, look at the map. Can you state generlly, whose lands are irrigated?

A—I cannot tell the names very well without refering to the map (Consults map I) The land in Section 14, Township 30, Range 27; also in Section 22. On 22 the water is used by Mr. Rumford. On Sec. 23 it is also used from the Farmers' Canal by Mr. Crocker, and on Sections 26 and 27. These are all in Township 30, Range 27. Also Secs. 28 and 34. I only know who
901 did use the water there. I have not been down there for some time. I was last upon those sections in 1880; I have not been there this year. I don't know anything about who is using water there this year. In 1879 and '80, water was used on Sec. 28 by a man named Noriaga; on 27 by the Portuguse tenants of Carr & Haggin; on Sec. 26 on a place occupied by Mr. Crocker; also on Sec. 26, Mr. Owen's place. On Sec. 34 by parties I don't remember. The place belonged to Mr. Burnap and Robt. Harold. On Sec. 35 by Portugese, and some other parties. All of those Section are in Township 30, Range 27. On Sec. 2, T. 31, R. 27, a place
902 owned by Mr. Crocker and others. On Sec. 3, tenants of Carr & Haggin; Sec. 4, Mr. May, Mr. Frear, and Mr. Carlock. On Section 5, there was some water of the Farmers' Canal used in connection with the water of Stine Canal, by the tenants of Haggin & Carr. On Sec. 8, the place of Carlock & Robb. On Sec. 16, by the Italians, tenants of Haggin & Carr. On Sec. 20, Mr. Crocker. Sec. 20, by Mr. Hitchcock. On Sec. 30, by Chubb and Stockton. There may have been other places where the water was used, but I don't know. I knew the Farmers' Canal
903 in the early part of 1879. I think I was on it in March, 1879. There was water in it then. Just what time it was, I don't recollect. I don't think at that time the water was plentiful. I think it was a time of scarcity of water, I think the water was low in the river at that time.

Q—Do you know generally, about the ditches and canals from Kern River, during the early part of 1879; say March, 1879?

A—Yes, sir. From the 1st of April to the 15th of March, I think the most of the water of the river was in the Kern Island Canal. I was not then in charge of

904 the Farmers' Canal. I was in charge of some land that depended upon the Farmers' Canal for water. My recollection is, we had not plenty of water at that time. A portion of the year we had some water, but not an abundance. I don't remember when we got it. I only remember it was very late in the irrigating season, and the crops suffered a great deal from want of water. And the greater portions of the crops that year, were lost for the want of water. The next canal below the Farmers', taken out from the left bank of the river, is the Mexican Ditch, sometimes called the Castro
905 Ditch. I only know that the canal was constructed and in operation when I first came to the country, and I have seen it every year since.

[Plaintiffs object to the introduction of any evidence as to the Castro ditch, on the ground that it is not admissible under the pleadings, in addition to the objections heretofore made to the other canals. Objection overruled, plaintiffs except.]

A—It was constructed when I first came here in 1871, and had been in use from that time to the present, to my knowledge. That takes water from a point on the river immediately above the head of the Old River, from Kern
906 River. I don't know how much land is irrigated from that ditch. I know the Stine Ditch or canal. The first work I saw on the canal was in the Summer of 1873. They were removing some brush from the head of Old River, and excavating, with a view of putting a head-gate across the head of the river. That is the first I knew of the Stine Ditch. I knew of the canal taking water from Old River, previous to that time, and of the organization of the Stine Company, some time previous to that period. The name of that Company was the Stine Canal Company. It was an incorporation. The head-gate put in at the head of Old River was 175 feet long. It was put
907 in a little below the head of the channel of Old River; it extended nearly across Old River. A portion of the channel had been filled up, bringing the width into this 175 feet. The channel was then narrowed down so as to connect with this gate. I have seen water going through that gate, and I have seen that gate keeping water back from the Old River. I have seen water standing five feet deep against the gate. If the gate had not been there the greater portion of that water would have gone down Old River. I saw that Stine Canal at different times from 1873 on. I know about the branches of that Stine

908 Canal. I was the engineer on the construction of the first branch that was made. I commenced in February or March, 1875. That main branch commenced at about three quarters of a mile below the head of Old River, Sec. 25, T. 29, R. 27; taken out from the left bank of Old River and followed the general course of Old River about 15 miles. The first part of it, for a mile, was 20 feet wide on the bottom, and the balance, for some distance, was about 30 feet wide on the bottom, then it was made 25 feet wide on the bottom to the end of the work. That branch exists now. The portion of it that was
909 left 20 feet wide has been made deeper to carry the full capacity of that portion of the canal which was made 30 feet wide in the first instance. It is now 20 feet wide. I think the maximum capacity of that portion, that which is 30 feet wide, is 4 feet in depth; that branch extends down 15 miles. There are a great many branches from the canal. The branch I have referred to is Call Branch No. 1, of the Stine Canal. There is also Branch No. 2. Branch No. 2 is taken out from the Channel of Old River on Sec. 21, T. 30, R. 27. It runs in a southerly direction and branches, connecting with distributaries. The water
910 is taken into branch 1, by means of a weir in the channel of Old River at the head of branch No. 1 across the river, that throws the water into branch No. 1. The water passes beyond that weir; and whatever is required is taken into branch No. 2; and the balance allowed the flow down the river, and sometimes made to flow out on the grass land near the lake. Branch No. 1 is correctly represented on Map I.

[The witness is asked to make a mark on Map I, as to where Branch No. 1 connects with No. 2, and he does so in ink].

Q—That is branch No. 2?

911 A—It just connects this portion of branch No. 1, or rather connects Old River to a portion of branch No. 1. below where branch No. 1 takes the water out. I don't know the acres under irrigation from the Stine Canal; the land irrigated from the Stine Canal lies between, and with the land irrigated by the Farmers' Canal; and it is impossible to separate the land irrigated by these two systems of canals. I don't mean that all the lands which are irrigated by the Stine are also irrigated by the Farmers'. A portion of the lands which may be irrigated by the Stine are irrigated by the Farmers'

912 Canal, and *vice versa*. During the year 1879, I think the water from the Stine Canal was used by O. B. Ormsby on Section 2, and also by Mr. Tippett and some other parties. On Section 11, in the same Township and Range; on Section 10 by Mr. Stine and Rainey; and on Section 15 by Mexicans; on Section 21 by Mexicans; Section 29 by tenants of Haggin and Carr; Section 30 by Clark and Jewett; Section 31 by Mr. Ellis. Mr. Ellis does not own Section 31, I think. He had it rented that year. Section 32 by Mr. Wade and Lundy; Section 6 by Mr. Ellis.
913 All of these are in T. 30, R. 27. Now in T. 31, R. 27. On Section 6 Mr. Ellis and Zumalt; Section 5 by tenants of Haggin and Carr; Section 8 by Carlock and Robb; Sections 9, 16, 17 and 19 by tenants of Haggin and Carr. The tenants were Italians. I don't know how many. I think 15 or 20. In T. 30, Range 27, on Branch No. 1. There was irrigated land on Section 12 by Mr. Castro; Section 13, tenants of Haggin and Carr; Sections 23, 25 and 35 by tenants of Haggin and Carr; T. 31, R. 27, Sections 2 and 1; and Sections 11, 13, 23. In all of these Sections there was some land under cultivation, irrigated by the Stine Canal. On
914 the lands I have spoken off, wheat, barley, alfalfa, corn, and potatoes, fruit trees, and a variety of crops are cultivated, and some vineyards. The Farmers has not the capacity to irrigate the lands which I have mentioned as being susceptible of irrigation, from both the Stine and the Farmers. The lands that I have mentioned are those that I remember. There may be other lands that I didn't know. There are also some lands irrigated by the Farmers' Canal that I did not mention.

Q—What is the acreage under that system of irrigation from the Stine; the aggregate amount?

915 [Objected to by plaintiffs as irrelevant and immaterial. Objection overruled. Plaintiffs except.]

The WITNESS—From 60,000 to 70,000 acres of land. I know the Baker, and Noble, or Anderson ditch. The Anderson canal was constructed in 1871 and 1872. I saw the men working on the canal at the time. I made a survey of the canal from the river out about a mile, I think. It takes its water from the Kern River, just below the head of Old River, 16 feet wide on the bottom. It was in the Fall of 1871, or the Winter of 1871–2 that it was constructed, and it was constructed, if I recollect right, 16 feet wide on the bottom at that time. I first

saw water in that canal in the Spring of 1872. It was, used on the crop of 1872, in the Spring; commencing perhaps, in April. I don't remember the exact time; about that time. The irrigating season here is from March until June; in some years arliere than March; depending on the rainfall and the season. Irrigating is going on now; but they are about through. I have known that Anderson canal since 1872, every year; I have seen water in it every year. That water has been used for irrigation every year. That canal irrigates land on Section 34 and 35, Township 29, Range 27, and on Sections 3, 4, 9 and 10. in Township 30, Range 27, and I think a portion of 16.

Q—Do you know the Gates ditch, or canal?

A—Yes, sir; I first knew that in 1872. It was partially constructed in 1872. I don't know when the work was commenced, but the canal was in use for the crop of 1872. It was about 10 feet wide on the bottom, and constructed to carry at that time ahout two feet in depth of water. I have known it ever since 1872, all the time, every year. Its present size is 12 feet on the bottom, carrying a depth of two and a half feet of water.

Q—When was it changed?

A—In the summer of 1873. It has remained the same size ever since 1873. It irrigates land on Section 4, 3, 9, 10 and 16, in Township 30, Range 27. Also some land on Section 34, in Township 29, Range 27. It takes its water from Kern River at a point below the head of Old River, about half a mile.

Q—What crops are irrigated by this canal?

A—Alfalfa and grain. The Baker and Noble also irrigates alfalfa and grain crops. I know the Buena Vista Canal. First knew it in 1871, in the Spring. There was water in it. I don't know whether it was used for irrigation or not. I only saw it when I crossed it. I knew it in 1872. It was used in 1872 for irrigating lands along the channel. At that time they used the channel of the Buena Vista Slough. I believe that is not used at present. In 1872, that canal took its water from Kern River, at a point in Section 33, T. 29, R. 27, and still takes it from that place. I mean the water was taken out in 1872, to irrigate the crop of that season. It was taken out early in the Spring. I knew it in 1873. It has been used all of the years since I saw it. up to the present time for irrigation and agricultural purposes. I saw work being done at the head of

920 the canal, I think, in 1872. They were putting in a head-gate. It was in the early part; in the Spring. I think the head-gate was 26 feet wide. That head-gate is still there, the same as in 1872. The canal was then about 30 feet wide at that point. At that point it was a constructed canal, being a cut made from the river into the natural channel. That cut still remains about the same size. It has been cleaned out at different times, and that may have changed the size somewhat, but no material change. In 1872, after the head-gate was finished, and the water turned in, it went down the channel of the slough
921 which I call Buena Vista Canal Slough. Water turned into that slough which follows the slough down to Section 26, T. 30, R. 26. When I first knew it, it was connected by some work that had been done from that point to Button Willow Slough, leading down to the margin of the swamp and overflowed land. This slough, from where the water was turned into it, down to Section 26, some portions of it was a good channel, others bad, and the water was spread out. I think there was about 7 feet fall per mile, to that slough; perhaps a little more, and if water was turned in it would run very rapidly. I ran levels over that country, which enables me to know
922 the fall. That slough is not used at present. Water is at present taken through the canal constructed in 1875. That canal, constructed in 1875, heads about half a mile below that head-gate. The water runs down through the slough, through this half mile, and then into the canal. The slough is not open below the canal; it is closed up, the right bank of the canal being extended across the old channel prior to 1875. In 1872, '73 and '74, the water which was used from the Buena Vista Canal, was always turned through this slough. The slough was the only canal. There were no drops in the old slough. There were two or three brush weirs where the ditches were
923 taken out. It just followed along in the slough, the natural level of the country. I know of the construction of the canal in 1875. It was begun in August and completed in October, I think. It was sometime in the Fall of 1875. It was 13 miles long, and it was 30 feet wide on the bottom, and 2½ feet deep. The grade is over 1.7 feet to the mile. It has a grade equivalent to 2 feet to the mile. There are two or three drops to the mile. The drops are necessary to take the fall out of the canal, also to raise the water into the side lateral ditches. In 1873–4, I saw water in Buena Vista Slough. I was

924 living in that neighborhood. They ran about the same amount of water down the old slough that they run in the canal at the present time. At times there was a great deal more water in the slough. My impression is that there was quite as much, if not more, water taken down the old slough than has ever been taken into the canal. I have at times seen a great deal more water going down that slough, more than has ever been taken in the canal. I have known of water being taken through the slough and used on Section 26, Township 30, Range 26. Water was used from the Buena Vista Canal on that section last year.

925 Q—To get the desired amount of water down there, or the amount of water which was formerly used, which you saw down there in 1872, '73 and '74, whatever it was before the construction of this canal, would there be any difference in the amount of water which would then have to have been turned in from the river, compared with the amount which now has to be turned in from the river to get it to the same place?

Mr. HOUGHTON—I object to the question, on the ground that it is irrelevant and immaterial.

[Objection overruled. Plaintiffs except.]

926 The WITNESS—It would require a great deal more water to run through the slough to Section 26 than would be necessary to deliver the same amount of water through the canal.

Q—Do you know anything about the lands which, in 1879 we will say, were irrigated from this Buena Vista Canal, and who used water on the respective tracts for irrigation?

A—I know of the irrigation on the canal in 1879, a portion of it; I will state it to the best of my recollection; that is for the crops of 1879; water was used from the Buena Vista Canal on Section 4 in Township 30,

927 Range 27; also on Section 5, Sections 8, 9, 16, 17, 18, and 19 and 20; in Townships 30, Range 26, on Sections 24, 23, 25, 26, 35, and 34; in T. 31, R. 26, Sections 3 and 4, and Section 10; there may have been some other places where the water was used, but I don't know anybody. On Sections 4, 5, 8, and 9 in T. 30, R. 27, and Section 17 and a portion of 16, the water was used by Haggin & Carr; on Section 18, by Jasper Meyers and Peter O'Hara; on Section 20, by Peter O'Hara; Section 17, by Mexicans; on 19, by Haggin & Carr; in T. 30, R. 26, Section 24, by Mr. Watson; on 25, I don't know what parties used the water, nor

928 on Section 23; 26 by Mr. Canfield, and a portion of 35 by Mr. Canfield; also Section 34 by Mr. Canfield; there was some water used at points below, but I don't know the parties. They raise on these lands wheat, barley, alfalfa, vines, and fruit trees and stock; to what extent I have no information; a great many cattle, horses, hogs, and sheep, and all kinds of stock, and all depended upon this canal for water. I know nothing about the notice of appropriation of water of that canal. Those people were using water from that canal for the crops of 1879; they were also using it in 1880 and 1881, to the best of my
929 knowledge. I have seen a great many of the places this year. In 1878 the most of the parties I have mentioned were living on the canal. This canal did not have an abundance of water in the early part of 1879; the reason was that the water was very low in the river at that time, and it was being used by other canals above the Buena Vista; I think the Kern Island Canal was using the most of the water at that time, say in March, 1879. I know the James Canal; it was begun in the fall of 1871; the notice was posted in the latter part of October, and the work commenced on the canal about that time; I posted the notice myself; I posted the
930 notice on the bank of the river, where the head of the canal is, on Section 33, T. 29, R. 27. I have not got that notice; I don't know what has become of it. After posting the notice I made a survey of the canal and put some men to work on it. I posted the notice of appropriation of the water; the notice was posted on the bank of the river at the point where the present head of the canal now is; after posting the notice I had it recorded; and after recording it I commenced work on the canal; in October, I think; I posted the notice the 24th of October, 1871. I remember the contents, the substance of it.

931 Q—Do you remember the words of it?

A—Not the exact words.

Mr. HOUGHTON—I suppose this goes in subject to the same objection and exception?

The COURT—Yes, sir.

Q—What was the substance of the contents of that notice, so far as you recollect?

A—The notice stated that the undersigned claimed a quantity of water from Kern River, and I think the quantity of water was described as being an amount that would fill a canal 100 feet wide, and 2 feet in depth; I

932 think it was the intention to carry the water to all of the lands to which it might be conveyed lying west of Old River, in T. 30 and 31 S., R. 25, 24 and 26 E. The water was claimed for irrigating purposes; the names signed to the notice were I. E. Gates, I. E. James, and Walter James; there was a date to the notice; it was about the 24th of October; I won't be positive, but I think that was the date; I think that is the date; I posted it; I left the notice posted there; I saw it several times afterwards; it remained posted for some time; it was posted in a conspicuous place; I should recognize a copy of that notice if I should see it; I have
933 not the copy that was recorded; I don't know what became of it.

Q—I will ask you to look at this, and see if this is a copy?

[Counsel offers to witness Record Book I, page 172, of Miscellaneous Records of Kern County.]

The plaintiffs object to the record being shown to the witness on the ground that it appears that the witness remembers all about its contents without referring to any copy; and on the further ground that there is not sufficient proof of the loss of the original.

Mr. HAGGIN—The witness has testified that he don't
934 know the exact words of the notice; the record is the original itself, and we simply want to show that is a record of the notice which was posted. I don't propose to refresh his memory, but to identify this as a copy.

[Objection overruled; plaintiffs except.]

The WITNESS—That is a copy of the notice I posted of the appropriation of water for the James Canal.

Mr. HAGGIN—We offer in evidence the record of the appropriation of the James Canal.

Mr. HOUGHTON—It goes in subject to the same objections we have made to the others.

935 [Same ruling and same exception.]

Said notice was then read in evidence, and is in the words and figures following:

WATER LOCATION.

Notice is hereby given that we, the undersigned, have appropriated and claim sufficient water from Kern River to irrigate, and for the purpose of irrigating, all of the odd-numbered sections not listed to the State, and sundry other lands, situated in Townships 30 and 31 South, of Ranges 25, 26, and 27 East, lying west of that

936 branch of Kern River known as Old River. It is estimated that the above quantity of water, with a rate of current equal to three miles per hour; will require a water way one hundred feet wide by two feet deep. The canal for the purpose above indicated starts from a point on Kern River, near the north-east corner of Sec. 33, in Township 29 South, Range 27 East, and runs in a south-westerly direction; surveyed October 15th, 1871; work commenced October 24th, 1871.

I. E. GATES,
I. E. JAMES,
WALTER JAMES.

937 A full, true and correct copy of the original recorded at the request of I. E. James, November 27, A. D. 1871 at 9 o'clock, A. M.

A. A. BERMUDEZ,
Recorder.

Recorded on page 172 of Book I of Miscellaneous Records, Kern County.

Mr. HAGGIN. Q—Do you remember when work commenced on that canal?

938 A—It commenced in the latter part of October, 1871. The canal was plowed from the head down about a quarter of a mile, and the excavation of the bed of the canal commenced; I had a very small force until January. 1872; the early part of 1872; in the early part of 1872 the canal was probably constructed about three-quarters of a mile, near the corner of Section 5. Prior to May 1st, 1872, it was constructed to Section 5; there was water in the canal prior to that time. We first used water, I think, in April; the latter part of April or the first of May; water was used in 1872. By the irrigating season of 1876 it was
939 constructed to Section 21, T. 30, R. 26; the work was done continuously, to the best of my knowledge, from the time it commenced up to the time it reached Sec. 21, T. 30, R. 26; I had some of the work done by contract, and I didn't see the men from time to time, as I would measure the work on it; when I saw them they were at work on it; we used water from it in 1872, and raised crops; the canal, in the spring of 1872, was 60 feet wide down to Section 7, and from that point to Section 21 from 30 to 40 feet wide; I have seen the canal every year since 1872; there has been water in it every year, and it has been used for irrigation.

940 Q—How much land is subject to irrigation from that canal?

Mr. HOUGHTON—We make the same objection to that—that it is irrelevant and immaterial.

Objection overruled; exception by plaintiffs.

The WITNESS—From 20,000 to 25,000 acres. I know the Plunkett Canal; I first knew it in the fall of 1872, or the spring of 1873; did not see it in the spring of 1872; I saw it late in 1872; I think it was in December; I won't be positive. Work commenced on it in December, 1872. I saw the men working on it in the headgate in December, 1872. I never saw the notice of
941 appropriation of water by that canal; the canal was in use in the year 1873; it was twelve feet wide; it is the same size now; it took water out of Kern River from a point on Section 33, Township 29, Range 27; half a mile below the head of the James Canal. The first two miles of the canal it is of the same size that it was when it was first constructed.

Q—Do you know how much land is subject to irrigation from that canal?

Same objection by plaintiffs; same ruling and exception.

The WITNESS—About 700 acres. It carries two feet
942 of water. I don't know what its grade is; I think it is a grade of two or two and a half feet to the mile, to the best of my recollection. The present size of the James Canal is sixty feet wide on the bottom; the same size it was in 1876; it carries three feet of water. A portion of the canal next to the river has a grade of two feet to the mile for three-quarters of a mile; after that it has an irregular grade; from two to four feet to the mile. The water has been used from the James Canal every year that I have known it, for irrigation. Water has been used from the Plunkett every year since I have known it; from 1873; the canal has been used every
943 year. I know the Meacham Canal; I first knew it in 1873. It was not constructed then; they were at work on the canal at that time; I think I first saw water in it sometime in the summer of 1873. I have seen water in it since then, and it has been used for irrigating ever since 1873. I know the Wilson and Parrish Ditch; I know very little about it; I don't remember when I first saw it; I think it was in 1875. I know that water was used in it; I saw water flowing out on the land; I have seen the ditch used for irrigation.

944 Q—What amount of land is subject to irrigation from the Meacham Ditch?

Plaintiffs make the same objection; same ruling and exception.

The WITNESS—I cannot state the lands irrigated from the Meacham Ditch; I don't know; nor do I know about the Wilson Ditch; I know three or four sections that were in part irrigated by the Meacham Canal; I only know of about 160 acres irrigated from the Wilson Canal; there may be more from the Meacham Canal. I know the Pioneer Ditch or Canal; first knew that in May, 1873. I was at the head of the Pioneer, when
945 the work was commenced on the canal. I saw the notice of appropriation; it was posted at the head of the canal. I don't know what was in that notice; I don't remember the contents of the notice.

Q—Do you remember anything about it at all?

A—Yes, sir; I have got a general recollection of the style of the notice; I remember some of the names that were signed to it—B. K. Said, Uriah Groschen, Vasar, Mrs. Said, Hiram Harris. I remember that the notice claimed a specified amount of water for irrigating purposes, and it stated the intention of the company to be to carry the water in a westerly direction and towards
946 Goose Lake; I don't remember the amount of water claimed. I first saw water used in the canal in the fall of 1873 or the spring of 1874.

Q—Do you know how much land is subject to irrigation from that canal?

Plaintiffs object; same ruling and exception.

The WITNESS—I could not state the acreage; approximately 15 or 20,000 acres. I know of land being cultivated and irrigated from that canal; I know of about 5000 acres; it is cultivated for grain, alfalfa, and fruit trees, and other crops; I think there were about 3000 acres under cultivation prior to 1879, and 15 or 20,000
947 acres susceptible of irrigation from the canal in 1879, the same as at present. I know the James and Dixon canal; first knew it in May, 1873. I saw a notice of appropriation posted on the bank of the river; I also saw the work commenced on the canal; I made the survey for the canal in 1873; June, I think. The notice was posted where the canal was afterwards constructed—at the head of the canal. I remember the general purport of the notice; it was a notice claiming the water of Kern River for the purpose of irrigation, floating lumber, and general uses; I think

948 the quantity claimed was 50 feet under a 4-inch pressure. The names signed to the notice were James, Dixon, Mr. Brittain, and I. E. James. I saw the work done on the ditch at different times; I visited the work frequently, from the time it was commenced until the canal was completed to the Johnson Slough; it was done without interruption. The size of that ditch where it connected with the Johnson Slough was thirty feet wide on the bottom, the same width as now; so it would carry three feet of water in depth. It was completed in 1874, I think—early in 1874; about January 1st. When I gave the depth as three feet, I meant the depth in
949 1874; it is the same depth now. The fall in that canal from the river to the slough is about two feet to the mile. I have seen the water in the canal since. I wish to correct a statement as to when this canal was finished; it was finished late in 1874; I think the water was turned in there in 1874 or early in 1875. The men were working on the canal when the water in the river raised, and it ran into the canal I think before the head-gate was completed; I saw it there first in the early part of 1875; I don't know when it was first turned in; it was used for the irrigating season of 1875, in the spring. I have known it since 1875; every year water has been
950 used in it—every year since then—for irrigation.

Q—How much land was subject to irrigation from that canal?

The same objection, ruling and exception.

The WITNESS—The water of the James and Dixon Canal runs into the Johnson Slough, in connection with the water of the Johnson Canal, and the waters taken out, the waters being taken out at different points on the slough, there being several weirs and side ditches taking it out of the slough. Of course it is impossible to separate the acreage of the two canals; I know the
951 Johnson Canal independent of the slough; it was constructed about the same time as the James and Dixon. The water was turned into the Johnson Canal in 1873; the Johnson Canal is constructed from the river to the Johnson Slough; that is about one-eighth of a mile in length; it was originally 20 feet in width; this emptied into the same slough that the James and Dixon did, the Johnson Slough; I cannot say what the fall is of the Johnson Canal from the river to the slough; it is very rapid through the cut; the canal was constructed for $2\frac{1}{2}$ or 3 feet of water in depth; I know the Johnson Slough itself beyond where the James and Dixon empties into

952 it; the James and Dixon empties into the Johnson Slough a little above where the Johnson Canal does; immediately above the Johnson; the slough beyond the point where these ditches empty in is a very large slough, and carries a great deal of water; it would carry the water that would be turned in from both of these canals at the same time; after the water is turned into the Johnson Slough by those canals they continue to use it in common; they have their separate branch canals; they use the slough in common down to the point where the Johnson people take out their water, which is only a short distance below the head of the canal; I do not
953 think the Johnson people used the slough below the point where their branch is taken out; the James and Dixon people monopolize the slough beyond that point.

Q—Will you answer my question, then, as to the extent of land subject to irrigation from those two canals —the Johnson and the James and Dixon?

A—Ten thousand acres of land may be irrigated from this canal; a portion of it may be irrigated from the Pioneer, but only a portion; I cannot state the exact quantity of land under cultivation that is dependent upon the Johnson and James and Dixon Canals; I know myself seven or eight hundred acres; it is cultivated in
954 grain and alfalfa, the same as the other land; the product raised from land from all of these canals is about the same; I have seen a ditch called May's Ditch.

Plaintiffs object to any evidence as to the May Ditch, on the ground that it is not admissible under the pleadings, in addition to the objections made to all the other canals.

Objection overruled; plaintiffs except.

The WITNESS—I think I first saw it in 1875 or '74; I saw water used in it, and irrigation from it; I have not seen it often since then; I don't know whether that ditch is still in use. I know the Joyce Ditch; I first knew of
955 the Joyce Ditch in the spring of 1873; I made a survey of the route of a portion of the canal to connect with the canal that was already constructed, to bring the water to Section 20, T. 30, R. 25. A portion of the canal was then already constructed; I know the canal as it is at present; it was the same in 1873; the same size as it is now; there was water in it in 1873, and it was used for irrigating; I have known it from 1873 to the present time; I have been in that country off and on from that day to the present time, and always saw the canal in use; the same products are raised from that canal

956 as from the others; the Joyce Ditch, or canal, is 12 feet wide on the bottom.

The COURT. What depth of water?

A—Two feet. The grade is about a foot and a half to the mile. I don't know exactly how much land is subject to irrigation from that canal; about three sections; there may be more. I think there are in the neigborhood of 1,200 acres under irrigation from that canal; prior to May 1st, 1879, I think about the same—1,200 acres; probably a little less. It is very much the same in connection with these other canals as with the Calloway. It requires much more water to irrigate the
957 land the first year than it does any subsequent year, but it is not quite so much so as to those other canals. The ground is not so porous on the island as on the other side of the river; but it applies generally to the whole system of irrigation in this country, but with much more force and to greater extent on the Calloway. I never saw a notice of appropriation of the Johnson canal. I did see the notice of appropriation of the Pioneer. I think I would know a copy of that notice if I should see it. I saw that notice posted in May, 1873.

(To Mr. HOUGHTON.) I remember some portions of its contents. I remember where the water was to be
958 taken out; I don't remember whether or not that was specified in the notice; I don't remember whether anything was said in the notice as to the width of the canal; I don't remember if there was anything said in the notice as to the depth of the canal; I remember something was said in the notice as to the direction of the canal; I don't remember if there was anything said in the notice as to the land to be irrigated from that canal.

Q—You don't remember anything about it, and still you think if you should see a copy of the notice that you could state whether it is a copy or not?

A—I know that I would know the notice or a copy of
959 it if I saw it. I cannot state when I last saw the copy of that. I have read the notice in the record book several times since that date. I examined the copy of the notice shortly after it was posted; I examined it in the record several times since the time it was posted, and my recollection is refreshed by the fact that I have seen a copy since.

Q—And not from the simple fact that you read it when it was posted. If you never had seen the notice but once, and that was when it was posted, and never had seen a copy since, could you tell a copy now?

960 A—I don't know that I could. I have seen a copy repeatedly since; I have not seen it recently, though. I think I have a copy in some place in my own records, and whenever I am going over those and come across a copy I sometimes glance at it; I have seen that copy a great many times; I don't remember the language of it. I was personally acquainted with all of the men interested in the Pioneer Ditch very soon after it was commenced. I knew about the construction from the time it was begun until the time it was completed; I was very familiar with everything connected with it.

Q—Still you cannot give the names of the parties who
961 signed that notice?

A—I think I could, if I took time to remember.

The plaintiffs object to the notice being shown to the witness.

The COURT—It may be shown to the witness.

To this ruling the plaintiffs except.

Mr. HAGGIN—Do you remember the amount of water claimed in that notice?

A—I think it was fifty feet.

Q—Do you remember for what purpose, if anything, whether it was expressed or not?

A—Yes, sir; among other purposes was floating lum-
962 ber, if I recollect right; I don't remember the width of that canal given in the notice; I think it was given.

Q—Do you remember the depth?

A—No, sir.

Q—Do you remember whether the direction was given or not?

A—No, sir. I have seen the notice before and since, and I think I would recognize a copy.

Mr. HOUGHTON—The same objection.

Same ruling and exception.

Mr. HAGGIN. Q—(Showing record book.) Is that a copy of it?
963 A—(After examining.) I think that is a correct copy of the notice I saw posted.

Q—The one on pages two and three of book of Water Rights of Kern County?

A—Yes, sir.

Cross-Examination of

WALTER JAMES.

I was the engineer on the Calloway Canal. I was working on the Calloway Canal through all of these

964 years since 1875. I was never regularly the engineer of the Calloway Canal.

Q—Who has been the engineer of the Calloway Canal?

A—Sometimes myself and sometimes Mr. MacMurdo, and other times Mr. Fillebrown and Taylor. Mr. Fillebrown has been the engineer for two or three years. I was on the canal in 1875 and '76, and laid out some of it in 1876. I think the sixty feet width extends down to a point on Section 20, Township 29, Range 27; that is about two miles or two and a half from the head of the canal on McCaffrey's Slough; it is sixty feet wide
965 all of that distance. After you pass that point it is eighty feet wide.

Q—Are you sure of that?

A—I am, sir; I am sure of it.

Q—Isn't there any point in that canal where it is less than sixty feet wide?

A—Yes, sir.

Q—Where is it?

A—Do you mean this portion from Section 20 back to the McCaffrey Slough?

Q—That is what I say.

A—There is no portion of that less than 60 feet at
966 bottom.

Q—Is there any portion of it less than 60 feet?

A—No, sir.

Q—No portion of the main canal at any point where it is less than 60 feet on the bottom?

A—No, sir; not that I know of; I think I would know it if it was; there are some portions of the canal that are 80 feet in width, where there was some hard pan left on one side of the canal, some little points that were very hard and that were left there until they would become softened by the water; but they are very short, and most of them have been taken out since. At
967 those points where the hard pan was left the canal was 60 feet wide or more; there was no point where it was less than 60 feet.

Q—Are you sure of that?

A—Yes, sir; I am sure of that. The grade of the first portion of the canal, near the river, is four or five feet to the mile; from the McCaffrey Slough some distance down it is .8 of a foot per mile, to some point opposite Lerdo, perhaps a little below there; then .6 of a foot per mile down to Sec. 22; and beyond that it is .4 of a foot per mile. I have run levels on that canal.

968 There are 13,000 acres of land being cultivated along that canal.

Q—How much of that 13,000 acres is being cultivated by the tenants of Haggin & Carr?

A—I think most of it. Very little of the crop has been lost this year from want of water, but there has been some 13,000 acres in all had been put in; there may have been 40 or 50 acres lost, that is all. I cannot say how much water has been running in that canal during the past two months; a portion of the time I think it has been running to its full capacity; the greater portion of the time it has not. I think the Beardsley
969 canal is 20 feet on the bottom, down to the railroad. I am the President of that company. Haggin and Carr do not own the majority of the stock of that company; they do not control that company; they did not enter into an agreement a year and a half ago that gave them the control of it. I was last at the head of the Farmers' Canal some time since. I don't think I have seen any water running at the head-gate of the Farmers' Canal since 1879.

Q—What do you mean when you say it has been running in that canal all of the time up to the present time?

970 A—I mean that is the fact; but I do not mean that portion of the canal; I mean some other portion.

Q—When you have reference to the other canals, is it in the same manner? Do you mean at some other point of the canal, not at the head-gate; or do you mean at the head-gate? When you speak of water running into the canals, what do you mean by that?

A—In all my statements I have made in regard to water running in the canals I have meant that it ran in the canal.

Q—At the headgate, is that what you mean?

A—I don't know that I meant that in every instance,
971 but it is so as a general proposition; I don't know any exception. I said I knew the Farmers' canal, and that water had been run into it up to the present time; I don't know the exact time that the headgate of the Farmers' was broken.

Q—You know as a fact that water has not been running into that headgate for a long time?

A—For a long time? Water has always run in the canal nevertheless.

Q—Then when you have said in your evidence heretofore that water was running in the canal, you did not

mean that water was running in the headgate of that canal all of the time, but was running at some point in the canal?

A—Yes, sir.

Q—You say that the Calloway Canal cost $102,000, or about that sum; what proportion of that money was expended prior to May, 1879?

A—That I could not state.

Q—You don't know?

A—No, sir.

Q—You say there were forty miles of side or lateral canals prior to 1879 and thirty have been constructed since?

A—That is my recollection; about that amount. I don't know what length of side canals were constructed in 1880; a greater portion of the forty miles I think was constructed in 1880. I don't know how much was constructed after May, 1879.

Q—How many miles were there of side and lateral canals in 1879?

A—I don't know.

Q—Very little, wasn't there?

A—Yes, sir; I don't remember.

Q—You say nearly all of the forty miles which was in existence on the first of 1881, was constructed in 1880?

A—That is my impression, that there was more constructed in 1880 than in any previous year. I don't know how much was constructed in 1879, the last nine months of it. There was a large amount of water flowing in the Kern Island canal during the years 1871, '72 and '73. I don't know where that water went to after it passed the mill. I was entirely unacquainted with that portion of the country at that time. I was not well acquainted with the canal from the mill to the river. I crossed the canal frequently on the road leading out to the east from Bakersfield, and always crossed the canal. All that I know about it is just in observing the canal as I crossed it. I was not at the head of it at all; nor was I below the mill where it emptied into the south fork. I think I have crossed the south fork below the mill. I don't know as a fact that the water that ran through that canal in 1871, '2, '3, and '4 after passing the mill, ran down into the south fork. I was farming after I came here in 1871, on Sec. 5, T. 30, R. 27. In 1872, I was engaged in farming the same place; and in 1873 also. I was also engaged in surveying. That

976 business took me all over the island during those years, but it never took me down the south fork. I do not say that I never was on the south fork during all these years; I think sometime in that period I went to Adobe Station and crossed the south fork.

Q—In going to the Adobe Station didn't you see water flowing down the South Fork there?

A—I think I did; I think I drove through some water near the Adobe Station; I dont know, but I suppose it came from the South Fork. The land on the Farmers' Canal, Sec. 35, T. 30, S. R. 27, that I referred to, has been farmed by Portuguese; those Portuguese are the
977 tenants of Haggin & Carr. The second branch of the Stine Canal I have referred to is in one sense a continuation of the first; the two branches are connected; they are right together; the first branch was designated when it was constructed as Branch 1, and a second branch was designated when it was constructed as Branch 2; they were constructed at two different times; the designation was given to them as a matter of convenience to designate one from the other, they being distinct and separate branches of the canal.

Q—You speak of Sec. 11, T. 30, R. 27, as being irrigated by the Stine Canal; who was farming that land?

978 A—Joe. Jacinto.

Q—For Haggin & Carr?

A—Yes, sir. Haggin & Carr also had a portion of Sec. 10 under cultivation, but it was not irrigated by the Stine Canal.

Q—You speak of Mexicans on Sec. 15; are they the tenants of Haggin & Carr?

A—No, sir.

Q—Do Haggin & Carr own the land?

A—Yes, sir.

Q—You say there were Mexicans on Sec. 21; are they tenants of Haggin & Carr?

979 A—I don't know whether they are or not.

Q—Do Haggin & Carr own the land?

A—They do.

Q—You spoke of a portion of Sec. 21 that Mr. Ellis was on; is he a tenant of Haggin & Carr?

A—On that portion of the section; he rented a portion of the section from Haggin & Carr.

Q—Is Sec. 7, T. 31, R. 27, also irrigated from that ditch?

A—Yes, sir.

Q—That is Haggin & Carr's, is it?

980 A—Yes, sir; so does Sec. 36, in the same township, belong to Haggin & Carr.

Q—What portion of the land under cultivation from the Stine Canal is occupied by the tenants of Haggin & Carr?

A—I cannot state; a great portion of it is.

Q—They own the canal, do they not?

A—Not entirely.

Q—They own a controlling interest in it?

A—Yes, sir; I believe so.

Q—They own nearly all of it, don't they?

A—Yes, sir; I do not wish to state that I know that
981 they own nearly all; they own a great portion of it; I don't know how much.

Q—You spoke of the Baker & Noble Ditch as irrigating Secs. 34 and 35, T. 29, R. 27; is that cultivated by Haggin & Carr?

A—Yes, sir.

Q—Also Secs. 3, 4, 9, 10, 16, in T. 30, R. 27?

A—Yes, sir; that is owned by them also.

Q—In regard to the Gates Canal, you say that Secs. 1, 3, 9, 10 and 16, in T. 30, R. 27, is irrigated by that canal; is that all owned by Haggin & Carr?

A—Yes, sir.

982 Q—And also Sec. 34, T. 29, R. 25?

A—Yes, sir; Haggin & Carr own or control the Gates Canal. Haggin & Carr also own or control the Baker & Noble Ditch. I believe they own the majority of the stock in the Buena Vista Canal.

Q—You did not give the amount irrigated by the Buena Vista Canal, did you?

The COURT—The witness gave an estimate of that.

Mr. HOUGHTON—What portion of the land irrigated by the Buena Vista Canal did Haggin & Carr own and have under cultivation?

Mr. HAGGIN—I don't know that the witness is capa-
983 ble of answering these questions. I don't know as we have any objection to them; nor do I know for what purpose counsel propose to make use of them, so I will merely request that the witness confine himself to his own knowledge and nothing else.

The COURT—Proceed.

A—I cannot state what portion of it; no, sir; not nearly all of it. There are a great many people cultivating land on the Buena Vista Ditch besides Haggin & Carr. I don't know whether they own Section 33, Township 29, Range 27, where the canal commences,

984 or not. It then runs through Sections 4, 9, 8, 17, 19 and 20, and these all belong to Haggin & Carr, I believe. It then runs through Sections 25, 35 and 36, in Township 30, Range 26. Haggin & Carr own 35, but whether they own 25 and 36 or not I don't know. I cannot say what portion of the land that is irrigated from that canal is cultivated by Haggin & Carr, or their tenants; I cannot say that the greater portion of it is or was; a great portion of it is, but I cannot say that the greater portion; and my impression is that much less than half is cultivated by them. Still all of the sections that the canal runs through, that I have men-
985 tioned, belong to them. When I constructed the James Canal a portion of it was constructed 100 feet wide; wider then than it is now; but only a short distance from the head; less than a quarter of a mile. After that a portion of it was twenty feet wide; that ran a short distance, perhaps 300 or 400 feet, and then after that it was 30 or 40 feet wide. That ran down to Section 5, three-quarters of a mile from the head. That three-quarters of a mile was completed early in 1872. Later in 1872 it was extended; partially constructed as far as Section 7. That would be two miles; it was partially constructed the full width, so as to carry water;
986 it was constructed 100 feet wide, but the middle portion of the canal was not taken out; an excavation was made on either side of the canal; the excavations were about ten feet wide. The next extension was from Section 7, which was in 1875. The first year that I was there, in 1872, I think about sixty acres were cultivated from this canal; in 1873 about 200 acres; in 1874 a little more; something over 200 acres; in 1875 1200 acres were irrigated from that canal. The greater portion of the land—2,000 or 2,500 acres—that can be irrigated by this canal, is owned by Haggin & Carr. The Plunkett Canal was commenced in 1872, and I have seen
987 water in that ever since.

Q—How long since there has been any water running into the headgate of the Plunkett?

A—I don't know, sir; I don't know of water running through that headgate for two years; I cannot say that I have seen any in the headgate for two years, but I have seen it where it crossed the road going to Belle View Ranch, and within two years; I cannot say when, but it is inside of two years; I think I saw it running there last year; I don't know that I have seen any this year there; crossing there; I don't remember; but I

988 think I saw the water at that point last year. Water has been running in that canal all of the time up to the present time, where it runs through the Belle View Ranch. The water that runs in it comes out of the river. There is a connection with the James by which water may be run into the Plunkett.

Q—Was not the water run into the Plunkett from this connection with the James, during this year 1880 and 1881?

A—Not to my knowledge; the water was taken through that connection. I have not stated that it did not run in from the river and I don't know.

989 Q—Wouldn't you know if the water was running from the river into the Plunkett?

A—No, sir; in the main canals I have seen water flowing in at the head-gate. I was at the head-gate of the Plunkett in 1879; no water was running in the head-gate at that time; there was no water in the river; and I don't think I have been at the head-gate of the Plunkett since 1879. Of the 700 acres subject to irrigation from the Plunkett Canal the greater portion of it is in the Belle View Ranch. Haggin & Carr own and control that canal; I don't know who its officers are. When I speak of the canal being two or three feet deep, I

990 mean that they are capable of carrying that much water, and do at times. I think I have seen two feet of water in the Plunkett Canal, and more than that, but I cannot state when.

Q—How large was the Pioneer Canal when you first saw it in 1873?

A—They had just commenced to construct it at that time; the first portion of the canal at the head was constructed 40 feet wide; that extended a very short distance; I think the first cut then was made ten or twelve feet wide on the bottom; that ran, I should say, about half a mile; then after that it was of varying widths,

991 and it ran into the slough. I could not say how long this cut of forty feet wide at the head was; it might have been three or four or five hundred feet. I think the ten or twelve feet portion of the canal was widened and enlarged in 1874 by the stockholders, not by Haggin & Carr.

Q—Didn't they enter into a contract to enlarge that canal to its present size?

A—Yes, sir; and did it. I don't know whether they control it now; they own very largely in the stock; I don't know how much. I don't know who its officers

992 are. They own a great portion of the land that is irrigated from that canal; their tenants are on a great portion of it. The James & Dixon Canal is about a quarter of a mile long from the point where it leaves the river to where it enters or empties into the Johnson Slough, and the Johnson Canal, running into the same slough, is not quite so far, and they come together at that point.

Q—And then the canals really consist of an opening into the river, less than a quarter of a mile long, running into a natural slough?

A—Yes, sir; my impression is that there are three
993 sections of land irrigated from the James and Dixon and the Johnson Canal; about two and one-half sections are occupied by Haggin & Carr or their tenants; I believe Haggin & Carr also control the James & Dixon Canal Company; I don't know who the officers are. I last saw the May Ditch not a great while ago; I have not seen it at its head for some time—since 1879, when the river was dry; I saw water in the May Ditch last month; it came in out of the Johnson Ditch, and not from the river; I don't know that the May Ditch has been abandoned for years; I have not noticed that that
994 ditch has not been carrying water from the river for years; I have seen water running into the Johnson Ditch a great many times within the last two years. I don't know whether nearly all of the water that is run into the Johnson Slough is run through the Dixon Canal or not; I have seen water running sometimes through one canal and sometimes through both.

Q—Have'nt you yourself assisted in putting the dam across the river, just below the James & Dixon, to throw the water in that canal?

A—Yes, sir.

Q—When?

995 A—Several months ago; it did not throw all the water in the river into the canals; we did not stop all the water in the river, and take it into the canal last fall; I did not see the weir after it was completed at all; I was there assisting in the construction of it.

Q—Who did you do that work for—Haggin &Carr?

A—Yes, sir; I saw the Joyce Ditch in the spring of 1873; I believe that Haggin & Carr control the Joyce Ditch.

Q—They own it, don't they? It runs through the Joyce place?

A—Yes, sir; 1,200 acres of land are irrigated from

996 that ditch, I believe; it all belongs to Haggin & Carr; I think McCaffrey Slough is correctly designated on Map "I;" it comes out of the river just above the bridge, and comes back again in Section 33, T. 29, R. 27; a portion of the water of the river passed through there at times; that slough did not carry water, except in times of high water, except some drainage water that came through it; I did not last fall, or last March, or at any time have a weir put in the river at the Pioneer Bridge that threw all of the water into the Pioneer Canal; I stopped up some of the cracks in the weir to get more water into the Pioneer Canal at one time; that
997 was several months ago; I don't know how high those planks have been there under the bridge; I never put any planks in there; I never had control of that work; I had something to do with putting it in there and stopping the cracks up. They wanted more water in the Pioneer; at the time of the construction of this sand dam that you speak of, to get some water into the James & Dixon Ditch, there was more water than could be controlled down there, and for the convenience of the work at that point, and I went up and stopped some of the cracks.

Q—Then you stopped the water from flowing up at
998 the bridge, so you could put this dam in below, and throw it all into the Johnson?

A—A portion of it; yes, sir.

Q—Who did you do that for?

A—For Haggin & Carr.

Re-Direct Examination of

WALTER JAMES.

At the time I raised the weir boards in the Pioneer
999 Bridge, there was a great deal of water flowing down the river. That did not stop the water from flowing down past the Johnson Ditch altogether. The stopping up of these cracks caused more water to flow into the Pioneer Canal; it stopped very little from going down. That was some time in March, if I remember right; that continued only for a short time; I think in two or three days more water was going down than there was before we stopped it up; it was a mere temporary stoppage to facilitate the getting of water into the Johnson Ditch. I had nothing to do with stopping water below

1000 the Pioneer Bridge in February, 1878. The arrangement that Haggin & Carr made with the Beardsley was such that if it had been carried out they would have obtained half of the stock of the canal. They proposed to construct the canal on an arrangement with the stockholders for that portion of the stock, but that arrangement has never been carried out.

Q—You stated in your cross-examination that a great portion of these ditches of the Calloway were constructed, I think you said in 1880. I will ask you if you were not mistaken about that? Were they not constructed prior to that?

1001 A—My recollection is that they were constructed in 1879 and '80. I don't know what portion was constructed in 1879 or in 1880. There are a great many people other than Haggin & Carr cultivating land which is irrigated by these several canals which I have described.

Q—How many do you suppose there are?

A—I cannot state how many.

Q—Approximately?

A—A great many people, there must be 300 or 400 different people depending upon those canals for irrigation.

1002

Re-cross examination of

WALTER JAMES.

The cause of there being more water in the river, or more water running down the river two or three days after the dam was put in under the Pioneer Bridge was, from the fact, that more water was flowing in the river.

Q—Is that weir in the Pioneer ditch still there?

A—Yes, sir. It was put there in 1877, and has been

1003 there ever since. It was put there by the Pioneer Canal Company.

MONDAY, May 23, 1881.

E. D. CROSS.

Recalled for defendants, testified.

Mr. FLOURNOY—You were a witness in this case some days ago, I believe.

1004 A—Yes, sir. I know the Calloway Canal. I think the first time I was ever out there and knew anything about it was along in May, 1875. I was out there with goods from Chester for Mr. Calloway, from Mr. Chester's store. When I went over there they were cleaning out McCaffrey's slough, and working there. It was in May, 1875. They were just starting I believe at that time. I think it must have been pretty well towards the middle of May, I don't remember exactly. I was over there several times in the year 1875. I might have been there a dozen times, for what I know, along during the year. I don't remember that I was
1005 there in June or July. I was out there once in a while however; and perhaps in June. I don't remember. I think I was out there as often as once a month from May on, during that year, and I saw the work, They were working on the canal. I saw the work progressing from time to time as I went there. I think they had just finished the cut, the last time I was out there in 1875; the deep cut. I think they had done a little ploughing beyond the deep cut the last time I saw it in 1875. I was out there several times in 1876, along the spring and summer and all along
1006 during 1876, I was there very often. They were then working on the canal at the different times when I was there. I don't know how far it had progressed in 1876. I guess it had got along four or five miles or such a matter, the last time I was there in 1876, may be more; I would not positively state, though, as to that. Mr. Barker had charge of the work in the spring of 1876; I don't know how long he remained; it appears to me that he had charge of it most of the time during that year. I was out there once in 1877, I think it was in March or April; it was just before I left here in May. They were working on
1007 it then—a small force of men at work there. I don't remember being there but once in 1877. I returned some time in January, 1879, from Tehatchipi. I don't think I was out there at all during 1878. They were going on with the work every time I was out there during the years 1875, '76, '77; always, when I was out there.

1008 Cross-examination of

E. D. Cross.

To Mr. Houghton—I suppose when I was out there in March, 1877, there was a force of half a dozen teams working there. I could not say how far the canal had been constructed at that time. I went to where the men were at work, and I should judge they were at work five or six miles out on the canal, may be more—five or six miles from McCaffrey's Slough, I mean. I could not say how long that cut is that I said they had
1009 just got through when I was out there last in 1875; I should judge it was somewhere in the vicinity of a mile long. I think when I was out there in May, 1875, there were five or six men at work at McCaffrey's Slough; there might have been more; I did not pay any particular attention to that. In 1875, at different times, there was quite a crowd there; at other times there were less. I did not count the men or pay much attention to the force; they were getting along with the work. I don't think I ever saw less than five—three, four or five—somewhere along there.

1010

L. L. Dixon,

re-called for defendants, sworn.

Mr. Haggin. Q—Have you at any time taken any measurements of the water flowing out of the Kern Valley Water Company's Canal?

A—Yes, sir; at the Head-quarters; it was taken at the waste-gate, which is this side of the Head-quarters camp, just east of the Head-quarters camp. I took one measurement on the 1st day of May, and one on
1011 the 9th day of May, of this year. I cannot remember what they are, but I have them in a book. I made a memorandum of them at the time. I made an exact memorandum of the measurements that I took, and they are correct. I have that memorandum with me. [The witness produces book.] The first one was taken on the 1st of May. In this book is the depth of the water running over the weir, and the width between the bays.

Mr. Haggin. Q—Will you give the measurement as you have it there?

A—I commenced on the west side of the gate, that

1012 is the side nearest the house at Wible's headquarters. The width of that bay was 5.77 feet. I mean the opening. There are 6 openings in the gate, and that was the width of one of them. The openings are divided by rafters. I measured the openings between these rafters, and there were 6 of them. The depth of the water over that bay was 9-10 of a foot. The next bay was 5.85 feet wide, and the depth of water was 9-10 of a foot. The next bay was 6.11 feet wide; the depth of water was 1.3 feet at one edge of it, and at the other edge it was 1.25 feet. The next bay was 5.84 in the clear, and the water was 1.15 deep at one end, and 1.10
1013 at the other. The next bay was 5.88 feet wide, and the depth of the water was 8-10 of a foot. The next bay was 6 feet in width, and 7-10 of a foot deep; the water was 5.4 deep below the gate, right on the floor, on the north side, just below the boards of the gate, not in the slough, right in the head-gate. The head-gate has a floor under it, and the water flows over this weir, and I put the rod right down on that floor of the gate, just below the boards—just below where the water runs over. The measurement on the other side was 4.85 feet. That would be inside the canal. I don't know whether I got down to the floor or not. There was a
1014 little mud in there. That was the depth of the water. The next measurement I made was on the 9th of May. I took this measurement with a level, and the other one with a rod. I don't exactly know how to give it so as to get it down; I can give the whole of the notes just as they are kept by an engineer. You see there is a back-sight and a fore-sight, and the height of the instrument and the elevation. I can give you these notes. I set my instrument down below the gate, that is north of the gate, on the bank of the slough, and had the rod held on a cross-piece in the head-gate,
1015 which gave me a sight 2.12 feet. I assumed an elevation of 10 feet, to get the height of the instrument. I took the back-sight and elevation, and it gave me 12.12.

Q—Now you have here, I understand, six columns?

A—Yes, sir.

Q—Will you read the first column in the first line, and then the second line, the second column, the third column, the fourth column, the fifth column, the sixth column, and so on, so that the reporter can get down exactly what it is.

Mr. HOUGHTON—You are going to follow right across the page?

1016 Mr. HAGGIN—Yes, it is divided into six columns. [The witness then reads from the book as follows]:

0.	2.12	12.12	0.	10.	8.67
			4.19	7.93	0.74
			4.25	7.87	0.80
			4.6	7.52	1.15
			4.55	7.57	1.1
			4.12	8.	0.67
			4.05	8.07	0.6
			3.45	8.67	0.00
			6.30	5.82	2.85

1017

Mr. HAGGIN. Q—Are there any other notes that you have there in connection with that work, that measurement?

A—No, sir.

Q—You have read all that pertained to this measurement that you speak of, have you?

A—Yes, sir.

Q—Now, it will be necessary to go back and describe what these things are. Take the first line.

1018 A—In the first column, the first line is zero. In the first column that is marked for the station. It is not marked here, but that is where we kept the station. The next column is for the back sight. The next column shows the height of the instrument. The next column shows the fore sight, and the next column the elevation. The 6th column shows the difference between the surface of the water and the elevation, which gives the depth of the water flowing over the weir. That is the same for all the columns on each line. Opposite the first line is the following note, "Surface of water above the waste gate." Opposite the second line there

1019 is the following note, "Depth of water in the extreme West Bay."

Q—I wish you would explain how you get those elevations.

A—In the first place we set up the instrument, and the first sight that you take is a back sight always. You add that back sight to the assumed elevation. If you take an assumed elevation, you add that back sight to it to give you the height of the instrument. In this case I took an assumed elevation of 10 feet. I added the back sight, 2.12 feet, which gave me 12.12 feet for the height of the instrument. Then the fore sight that

1020 I read on this first bay, was 4.19 feet. I subtract this fore sight from the height of my instrument, which gives me an elevation of 7 93 feet. The next fore sight on the rod, on the next bay, was 4.25 feet. Subtract that from 12.12 feet, and it gives me an elevation of 7.87 feet. The next fore sight was 4.6 feet. Subtract that from 12.12 and it gives me 7.52 feet. The next fore sight was 4.12 feet. Subtract that from 12.12 feet and it gives me 8.20 feet. The next sight was 4.05 feet; subtracted from 12.12 feet, it gave me 8.07 feet. The next sight was 3.45 feet. That shows the rod held on the surface of the water above the waste gate. That
1021 subtracted from the height of the instrument, 12.12 feet, gave me an elevation of 8.67. The next fore sight was 6.30 feet. That, subtracted from 12.12, gave me 5.82 feet, which was the surface of the water below the waste gate. Now, the surface of the water being 8.67 feet, if you will subtract this elevation right straight through, subtract each one from 8.67 feet, it will give you the depth of water flowing over the bay. 8.67 feet is the surface of the water above the waste gate. 7.93 subtracted from that gives me a difference of no feet .74. That is the first bay. The depth of water in the first bay was .74 of a foot; in the second bay .8 of a
1022 foot; in the third bay 1.15 feet; in the fourth bay 1.1; in the fifth bay .67 of a foot; in the sixth bay .6 of a foot. That was the depth of the water running over the bays. These measurements are correct. The bays were the same that I measured before.

Q—Did you make any calculation of the amount of water?

A—No, sir; I did not make any. Mr. Schuyler made these estimates marked outside here. I made a measurement also of water in what is called East Side Canal. That was on the 9th of May, I think, of this
1023 year. The gauge in the East Side Canal read 3.20; that is, the gauge put in by the State Engineer's Department. It is nailed to the lower side of the headgate, on one of the uprights. One bay of this gate was open, and the depth of water over that bay was $\frac{8}{10}$ of a foot, and the width of the bay was 7.7 feet, and the water was falling over the weir boards about a foot and a half or two feet; that is, a foot and a half or two feet lower below the gate than it was above. I did not measure the distance of the water above or below; I approximated that; that is, I just approximated the depth it was falling over into the water below. I made

1024 no measurement of the water running into the East Side Canal on the 1st of May. I saw it on the 1st of May. There was some water in there, but it was standing; none was running or flowing. There might have been a little seeping through the cracks. That is all the measurement I made of the discharge of these gates.

Cross-examination of

L. L. DIXON.

1025 To Mr. HOUGHTON—The fall of the water over this first weir dropping into the slough, the difference of the water above and the water below, was 2.85 feet. There was only one bay open on the East Side Canal. I did not on that day follow down on the East Side Canal at all. I think I was down there on the 15th of May, 1881. I went down about to the end of it, and drove right along on the bank of it. There was no water running into the East Side Canal from any other direction that I could see. I have not been down there since. I never saw the water being discharged
1026 from the Pioneer Canal against this East Side Canal, because there is a culvert in that canal to irrigate that section of land, just about that place, just east of the East Side Canal. I don't know whether the water comes out of there or not. I have never been along there in the day time this year. I have not been on the Pioneer Canal any lower down than the old Tracy place, down opposite Mr. Said's place. When I was down on the east side of the levee I did not cross to the main land. When I went on to this east side levee I went on to it from down towards the headquarter camp. It was night. There was no water down there.
1027 It was at that bridge across at the headquarters where I crossed and went on to it. I never went off the levee. I have driven the whole length of that East Side Canal. I drove up on the north end of it. There was a little water there; it was not running. It was a little standing water there, two or three inches deep. I could not tell where that water came from. I could not tell whether it came from the Pioneer Canal or not. There was water there opposite Wible's Camp.

Q—Where did you get on to the East Side Canal?

A—I went on the East Side Canal right along there at the end of it; went right on to the end

1028 of it. I came on the edge of the swamp land and came on to it. I was driving south, in a southerly direction. I came on to it on one of these little knolls, right about here, and came up the swamp this way [showing on Map I]. I came along the margin of the swamp and overflowed lands through Section 28, Township 30, Range 24, to Section 2. Came on the road there. On that road; somewhere along there. I don't know exactly where it crosses there. I think that road is inside of the swamp land.

Q—When you came along that road how far did you continue along that road before you turned and went
1029 into the East Side Canal?

A—I don't know. There is a branch road soon after you reach these furrows, up towards the east side of the canal.

Q—In making your trip along the margin of that swamp land, coming up on the East Side Canal, did you cross any water?

A—No, sir; I did not.

Q—You did not cross any water at all until you got up on the canal?

A—I crossed a little right there at the end of the canal where it runs out.

1030 Q—It was running out there? Where did that water running out there come, do you know?

A—No, sir.

Q—Don't you know, as a fact, that it came down the Pioneer Canal, a portion of it?

A—I never saw it come from there; I would not swear to it; I do not know, because I never saw it. I was not on the Pioneer Canal at all during May. I don't think I have been to any point on it lower than McClung's ranch. I have never been down to the west end of it. When I drove on to the end of the east
1031 side canal, it was night. I could not see any water running west there. There was a little standing water right at the end of the canal; water, I suppose, 3 or 4 inches deep. When I drove along there in the east side canal there seemed to be water standing on my right there against the levee; a little, not a great deal there. It was not running; I am sure it was not running. It was night when I went down there.

Q—How do you know it was not running, if it was night?

A—I don't know that it was running that night. I don't know that there was any water there that night;

1032 I could not see it. When I was down there before there was some water there standing between the checks; but I don't know where it came from. I did not look to see where the water did come from.

Re-direct-examination of

L. L. DIXON.

I could not tell where the water that was at the end of the east side canal did come from. There was a little hole right along there, about the edge of it, that
1033 had water in it; standing in it, when I was there in the day time. There was not a great deal; I waded through it. I think it was about six inches deep. I did not see how much land it did cover. It was a pond; just spread out. It did not cover half an acre. On that day there was water in the east side canal, and at the end of it. I think it was on the 15th of May. I don't remember distinctly now. If there had been water running from the Pioneer Canal down there to the end of the east side canal, I think I was in a position to have seen it; but I did not see any.

1034

Testimony of

E. H. DUMBLE,

Recalled for defendants.

To Mr. FLOURNOY. I am a resident of Kern County. In 1863 I lived in Visalia.

Q—Were you ever down upon the swamp land district between Buena Vista and Tulare Lakes?

A—Yes, sir; I was through there first about in April, 1863. I cannot tell exactly where it was; be-
1035 tween 8 and 12 miles south of Tulare Lake. I crossed the swamp land district at that time. There was considerable of it under water.

Q—Running?

A—No, sir; I don't recollect that it was running; standing water.

Q—How did you manage to cross there? Was there a road through there?

A—I had a guide to show me across. We crossed on a cattle trail. We crossed water, a good deal of water, shallow water. We crossed over the swamp land from the east to the west side.

1036 Q—Did you cross any slough in crossing?

A—No, sir; we crossed right through the water, and there was considerable water; perhaps, altogether, ¾ths of a mile of standing water.

Q—How deep was it?

A—Deepest right in the trail; perhaps two feet deep. It was deeper right on the trail than it was off to either side. The trail was trampled down; it was from 2 feet to nothing. We crossed over some high places and salt grass.

Q—Did you find any channel?

A—No, sir; there was no channel.

1037 Q—Any signs of a channel?

A—No signs of a channel. I crossed it twice in 1863, very near the same place. The other time I crossed it in August. In August I crossed from the east to the west, going the same route, very nearly; I could not say it was on the same trail exactly. I found water in one hole in crossing. We went around it, to the north end of the water hole. We found no channel in that crossing; nothing but that hole. We went around it on level ground; that is, to all appearance. As near as I could see, it was perfectly level.

Q—Were there any tules in that swamp?

1038 A—Yes, sir; it was tules all the way across; very dense tules. I crossed in 1864 twice, both times in July; the first time somewhere near Goose Lake, and a little north of Goose Lake, perhaps 2 or 3 miles. I crossed from the east to the west, and in 6 or 7 days afterwards I crossed from the west to the east, back again, in about the same place. I found water holes in going across; I saw, perhaps, a couple of water holes on the trip; we went around them. There was no water running in the swamp then. I recollect passing two water holes.

1039 Q—Did you cross any channel?

A—No, sir. I crossed there in August, 1865, once, that was all; crossed from the east to the west. I think I crossed a little nearer to Tulare Lake in 1865 than I did the first time; perhaps 5 or 8 miles from the lake, south of the lake. I found water. We camped on it that night, alongside of a water hole. It was not running.

Q—Is that a tule country there?

A—Yes, sir; at that time it was all tules; can't tell you what it is now.

Q—Did you cross any slough or channel in that trip?

1040 A—No, sir; we went around water holes with stagnant water in them. We sunk down alongside of the holes to get drinking water.

Q—Did you find any channel anywhere in crossing at that time, in 1865?

A—No, sir; not that I could see. I never crossed there at any other time in 1865. I have not crossed that part of it since 1865. I have never been east or west in the Swamp Land District but once since, and that was in 1876. I think in February, and again about 4 weeks ago. I have been at Cole's Bridge. I was there in January, 1871, somewhere in that vicinity;
1041 I could not tell exactly where. I was on the south side of the south branch of New River. I was fishing and hunting. On that trip I did not go north of the south branch of the river. That was in December, 1871. There was very little water there at that time. I don't think it was running at the time. It might have been running. There was no perceptible current that I could see. I was next there in January, 1872. The water was running. There was some considerable water. I was there hunting and fishing.

Q—How far north of Cole's Bridge did you go at that time?

1042 A—I went up to about the middle fork, following along the east side of the slough. The water was running. It was running down into Buena Vista Lake, and there was a considerable body of water running. I could not say how much.

Q—Did you see any running in any other direction?

A—I did not, no sir; that water was running towards Buena Vista Lake.

Q—Were you then down as far as the Middle Fork?

A—Yes, sir; up, rather, north.

Q—That is, as the water was running then?

1043 A—Yes, sir; I was there next on the 5th of July, 1873, at Cole's bridge, in that vicinity. We were hunting and fishing. There was very little water there then; it was running, running south. We went north, to the South Fork; we did not go north of the South Fork on that trip. The water was running towards Buena Vista Lake. I was there in January or February, 1876, at Cole's bride; there was water there then. I was there again about four weeks ago, at Cole's bridge; I was at the Buena Vista Ranch, and passed over that slough to the west side, about a mile and a half, I guess, below the terminus of the South Fork of Kern River, and

1044 then went up and crossed back over on the east side at Cole's bridge. I saw water at Cole's bridge—considerable water. It was running, running into Buena Vista Lake.

Q—All of it that you saw?

A—There was a little water running north when I crossed it—north of the South Fork.

Q—Have you ever seen the water running north there before?

A—No, sir; I have not.

Q—In any of those visits?

A—No, sir; since I have been to Cole's bridge, in
1045 1871, 1872 and 1873, a levee has been built and a bridge. When I was down there in 1876, I noticed there was a deep channel through there, a very deep channel under the bridge; below the bridge there is considerable of a channel. North of the bridge it had been considerably filled up. There was some fall there, and a very strong current flowing south, below the bridge. This was the condition of things when I was there on my last visit, recently. In 1876 the water was backed up on the north side of the bridge; there was a weir and dam built in the bridge; a dam had been constructed for that purpose, with slats and
1046 boards. The water was dammed up. I should think it was four feet higher on the north side than it was on the south side—four or five feet difference. When I spoke of the deep channel under the bridge, I referred to my trip in 1881. The remark that I made about the water being dammed up, I refer to 1876.

Cross-examination of

E. H. Dumble.

1047 Q—In January or February, 1876, what was there to hold the water to make it 5 feet, or 4 or 5 feet higher, on one side of Cole's bridge than on the other.

A—There was some sod and earth; may have been some plank. I could not say as to that. There was a bridge there; what appeared to be a bridge or weir; I suppose it was both. There was a weir there at that time, and there was a dam. I think at that time there was a weir in the bridge. Under the bridge there was sod and earth, and may have been some planks. I noticed there was a place for planks. Whether there was any planks or not, I don't know. The earth and

1048 sod was put there under the bridge to obstruct the water. It was sufficiently high, I think, to raise the water 4 or 5 feet higher on the north side than it was on the south side. The water at that time was not running into the lake.

Q—It was running the other way?

A—I don't know whether it was running the other way or not; I could not say. There was water running down the river at that time; none going into the lake. That was in January or February, 1876; I think that was about the time. I would not be positive about it;
1049 I am not so sure about that as the other dates I testified to. It was in the early part of 1876. I know I first went down on this body of swamp land in April, 1863; I think it was about the first of April. I was on my way to David Alexander's, at the San Emedio ranch. I did not cross on what is known as the San Luis Obispo Road. I did not cross on any road, but on a cattle trail; I crossed with Mr. Hawkins. I was going over to Mr. Alexander to get a statement of his personal property and real estate; I was then County Assessor of Tulare County. I could not state the exact distance I was south of Tulare Lake on that trip. Mr. Hawk-
1050 ins went with me, to show me across the swamp. He lived wherever night overtook him, generally. I mean, when I speak of crossing within 8 or 10 miles of Tulare Lake, that distance from the water line of Tulare Lake. I should think the water where I crossed was in the neighborhood of ¾ of a mile wide, or a mile altogether. We got into the swamp some distance before we came to the water. There were big tules all the way across there. The water was running.

Q—Did I understand you to say, that the water was running?

1051 A - If it was running, I didn't notice any current, it might have been or might not. I cannot say. I was not there with a view of seeing whether water was running or not. I went from Mr. Alexander's to Kern Island. I went around the east side of Kern Lake. was there again in August, 1863. I was on the same business, to get another statement. I did not get it the first time I went, Mr. Alexander being away. I was there in connection with the Assessor's Office. I generally made two trips around that part of the country each season. I went both in August and in April, to get the statements from Mr. Alexander.

1052 Q—Where did you cross at that time, the same place?

A—I think I did, somewhere about the same place. I found one or two water holes in crossing. I am pretty positive that there were not three. I was looking for water holes. Water was very scarce through that country, at the time. I was there again in July, 1864. I think it was July, I wont be positive. I was there on the same business, getting statements, again going to Mr. Alexander's and all parts of the country through Tulare County. I was County Assessor that year. At that time I crossed north of Goose Lake.
1053 How far north I cannot tell. It might have been a mile, or might have been three or four miles. I can only judge of the distance from the point I started from. I found one or two ponds crossing at that time. I did not pay particular attention to it. We generally looked for water, when we travelled about. I think I returned in five or six days, nearly on the same trail. Found no running water at all. In August, 1865, I was south of Tulare Lake again. I think that at that time I crossed six or seven miles south of Tulare Lake. I crossed nearer the lake than I did in 1863, and there were tules all the
1054 way across at that point. I don't know whether that was near the San Luis Obispo road or not. I don't know where that road is. I was there in 1865, on the same business that I was before. I wish to correct that. It was in March or April, 1865, that I was there.

Q—You found no water in March or April, 1865?

A— I think not; I don't think we found any water at all. I don't remember to have seen any water.

Q—I understand you to say that prior to that trip to Cole's Bridge, recently made by you, you never saw
1055 any water running north from Kern River?

A—No, sir.

Re-direct-examination of

E. H. Dumble.

When I speak of my trip across the swamp land in 1863 and 4, I refer to two holes, I mean two holes of water. There may have been other holes that did not have water in them, but I don't recollect; I only recollect those that did have water in them.

1056 T. R. FILLEBROWN,

Recalled for defendants:

I have made computations of the amount of water flowing through the waste gate of the Kern Valley Water Company's Canal, other than those that I testified to a few days ago. I made them from notes taken by Mr. Dixon at two different times.

Q—Would you know those notes if you saw them?

A—Yes, sir; I think I would.

1057 Q—Are these the notes [showing book produced by the witness Dixon]?

A—These are the same notes from which I made the calculation.

Mr. HAGGIN—I presume counsel will admit that they are the same which Mr. Dixon just read.

Mr. HOUGHTON—[to witness] When did you make the computation, Mr. Fillebrown?

A—About a week ago, I think it was; more than that, perhaps. Perhaps 2 weeks; I don't remember the exact time that I made the calculation. I don't think I was in Court when these notes were read. I rec-

1058 ognize these figures, however, as the same ones.

Q—That was all the data you had, was it, to make these computations from?

A—Yes, sir.

Mr. HOUGHTON—They appear to be the same notes.

Mr. HAGGIN. Q—Do you remember what was the result of that computation from these notes?

A—The first, made from the first measurement, made the discharge 111 cubic feet per second. From the measurement made the 9th of May, I made the discharge 95 cubic feet per second.

1059 Q—Did you make any estimate of the discharge from the East Side Canal?

A—No, sir. At every time that I have observed it lately there was no water running through except what leaked through between the boards. The water seemed to be perfectly stagnant below.

Q—Did you make any estimate of any discharge from any notes taken by Mr. Dixon?

A—I did not.

Q—Look at this and see how long it will take you to make an estimate of the discharge, from these notes, of the East Side Canal.

1060 A—5 minutes, I guess. [After making computation] I make the discharge 18.7 cubic feet per second.

Q—That is from the notes of Mr. Dixon, the discharge of the East Side Canal?

A—Yes, sir.

W. R. McMURDO,

A witness called for defendants and sworn, testified as follows:

1061 I reside in Kern County; have resided there for 6 years; reside in the vicinity of Bakersfield; about 7 miles southwest of Bakersfield. I am a surveyor. I am County Surveyor at this time of this county; have been for 4 years last past. I have made some surveys through this portion of the county represented upon this Map I. I have been over the most of that country. I am familiar with that portion of the county. I made the most of Map I. I know it is correct, or substantially so. It is as correct as a map can be made on that scale.

1062 Q—Do you know anything about Buena Vista Slough?

A—Yes, sir. I am familiar with Buena Vista Slough from the lake down as far as it goes; as far as there is any slough.

Q—Have you made any survey of that slough?

A—Yes, sir; I have meandered that slough as far as there is any slough to be found; as far as the end.

Q—Whereabouts does it end?

A—It ends on Sec. 24, T. 29, R. 23.

Q—When did you meander that slough?

A—I meandered a part of it in May, 1879, and a

1063 part of it, I think, was in 1880.

Q—Have you examined that slough from Buena Vista Lake to that point you speak of where it ends?

A—Yes, sir.

Q—You say that it ends on Sec. 24, T. 29, R. 23?

A—Yes, sir. I know where Wible's Head-quarters are. They are on Sec. 15; I think it is on 15, or near the line of 14 and 15, T. 30, R. 24. It is on the east half of the east half of Sec. 15. I think it is about a quarter of a mile from the south line of 15. It is on the S. E. quarter of the S. E. quarter of Sec. 15.

Q—In going from Buena Vista Lake northward

1064 along the slough, say at about Wible's Head-quarters, how did you find the slough from there?

A—From Wible's Head-quarters, or what is known as Wible's Head-quarters, going northwesterly, that slough, it has——

Q—[Interrupting]. Start about half a mile south from Wible's Head-quarters, and then trace the slough.

A—About half a mile south—that would be in Sec. 23—it runs in a very crooked channel until it gets on Sec. 14, near the S. W. corner of Sec. 14, T. 30, R. 24. There the slough, when I meandered it, was dammed up by having a levee across it; a levee placed
1065 there to make one bank of the Kern Valley Water Company's Canal. I think it was about 10 or 12 feet high at that point; from the bottom of the slough it was about 14 feet, I think; I mean 10 feet above the bottom of the canal; 10 or 12 feet above the bottom of the canal. That levee was completely across the slough from one side to the other. The top of the levee is on the even grade.

Q—So that any water coming in the slough, when it got down there, would have to raise 14 feet above the bottom of the slough to go over the levee?

A—I think it is about 14 feet. It would be a com-
1066 plete obstruction to any water continuing down the slough at that point. It would force the water to go down either the canal, or back it up towards Buena Vista Lake.

Q—Is there any opening in the levee at the point where it crosses the slough?

A—No, sir; I never saw an opening. Nearer Head-quarter Camp there is a waste-gate. I don't remember how far that is from the point I have described. That crosses the slough probably a quarter of a mile. It is between there and Head-quarters. I don't remem-
1067 ber how far it is, exactly. The waste-gate is pretty near the Head-quarter Camp. I don't know how far that Head-quarter Camp is from the slough.

Q—After crossing the levee and going northward, will you describe this slough?

A—This slough continues on pretty much the same character of slough. It is very crooked; gouged out in deep holes on the bottom; has perpendicular banks in places; continues on in that way probably a mile to the northwest; it continues that way to Section 15, until it reaches the north line of Section 15.

Q—Continues how?

1068 A—Continues to run very crooked, and it has very deep holes along there, and it has well-defined banks until it reaches very nearly the north line of Section 15, T. 30, R. 24. There are ponds on the outside of the channel, and the water of the slough goes up in this pond there and into Section 15, between the channel and the bank of the canal.

Q—You say that it has defined banks. How are the banks as to height above the bed of the slough?

A—It is hard to tell where the bed of the slough is there. There are deep holes in it. In some places they are 10 feet, I suppose, above the bottom of the
1069 slough?

Q—These deep holes?

A—That is, the deep holes. The water;—take an ordinary small head of water, and run it through there and it will be probably 4 feet above the surface of the water.

Q—That is, the lowest bank in there would hold 4 feet of water in Section 15.

A—I don't know. There are probably lower places than that.

Q—There are places where 4 feet of water would not be contained in the banks?

1070 A—I think so.

Q—From the north line of Section 15, describe the slough through the next section, that is, Section 10, T. 30, R. 24.

A—The slough, a part of the way, has good banks in there, and it is very crooked, and the current is very sluggish, very slow. It has very little fall, and it has very low ground on both sides. There are places where the bank is very low, almost as low as the bed of the stream in places. On the east side of the slough the bank, as a general thing, is higher than on the west
1071 side.

Q—The bank is as low as the bed of the slough itself?

A—Yes, sir.

Q—What depth of water will that portion of the slough carry without getting out of the banks through Section 10?

A—I hardly know how much it would carry; in some places it has deep holes in there. Through the greater part of 10 it would carry, probably, as much water as in 15, until it got pretty well up into Section 10. Then the banks are lower, and it would carry very little

1072 water; 2 or 3 feet of water above the general bottom of the slough.

Q—You think it would carry 2 or 3 feet at every point through without overflowing the banks at all through 10?

A—No, sir; up to a good way in 10. I say I don't know how far exactly; pretty well up into 10. The bank on the east side is a good bank. On the west side it is low, and it has a levee along that bank to keep the water from flowing out.

Q—Then, in your description of the amount of water, have you taken into account the levee that is used?

1073 A—No, sir; through the balance of Section 10 the banks get lower, and continue to get lower until it gets up into Section 3.

Q—How is it in Section 3?

A—The banks there are lower, and there are hardly any banks to it at all. It would carry probably one foot of water along there without overflowing.

Q—How is the general course of the slough through Section 3?

A—It is not so crooked as through Section 10. It runs through a small portion of Section 3, only.

1074 Q—And then from the north line of Section 10, what is the course of the slough for the next mile or two; is it correctly laid down here on map I.

A—Yes, sir.

Q—It runs through a little portion of Sections 3 and 4, and some of Section 5, and to the north township line of Section 30?

A—Yes, sir.

Q—From the north line of Section 10, to where it reaches the township line, please describe the slough.

A—The slough there is very shallow and undefined. It has banks in some places, and they are very low,

1075 and in other places it has no perceptible banks, and is very undefined. The general course of the slough is north-west. It is pretty crooked and has a great many bends.

Q—After leaving Section 10, as laid down on this map I, and going through Section 32, and a portion of Section 31, to the north line of 31, T. 29, R. 24; how was that portion of the slough?

A—That portion was a well defined slough having banks probably two or three feet high.

Q—Will you look at the map and describe the remaining portion of the slough from the north line of Section 31, T. 29, R. 24?

1076 A—The slough there has banks, but the banks from there begin to get lower, and the slough begins to get narrower and smaller, and shows signs of decreasing in every way in its capacity. The tules are growing in it in places, but not entirely across. Then coming down from the north line of 31, same township and range, the slough has a defined channel, from there through Section 25, T. 29, R. 23. The channel is still very crooked, and is getting smaller all of the time to the north line of Section 25, and the balance of the slough through Section 24, for about half a mile, has very low banks. The banks get lower as you go north, until finally it
1077 runs out in the tules; and there is no appearance of a channel. The water spreads out all over the tules there—the swamp. There is no appearance of a channel any further. We were unable to trace it any further, any defined channel.

Q—Your object in making that meander was, what?

A—To find and to lay down correctly on the map any channel that there might be through that body of swamp land.

Q—In going from Wible's camp north, did you find any branches or other channels running out of that channel?

1078 A—I found no branches at the time I was meandering it, found no branches at all. At other times I have seen the water flowing out all over the banks; I did not call them branches.

Q—When you meandered through there, was there any water in the channel?

A—The first time I meandered from the Head-quarters camp down towards Section 3, there was water standing right in the tules; there was no water running in there at the time. I crossed it at Section 4, I think it was, T. 30, R. 24; I crossed it at that time,
1079 and there was no water holes or water at all at that time.

Q—When did you meander the balance of the channel?

A—The balance of the channel southward from there towards the Head-quarters camp, and there was water standing in deep holes in it.

Q—From Section 4, northward, when did you finish meandering?

A—In 1880, I think, about May—April or May, I think it was—I saw no branches.

Q—When you reached the end of the slough in Section 24, did you go any further north at that time?

1080 A—Yes, sir; I went northwest and northeast; but the water was flowing out all over the country so that I could survey no further. I went as far as I could trace out the channel—that is, as far as I could perceive any channel at all.

Q—When were you down on the slough again from Wible's Head-quarters, northward?

A—I think I was there again in September or October, 1880. The slough at that time was dry. I went along it again, a portion of it, between the south line of Section 32, T. 29, and along the banks of it up to Bonestell's house. I went up to the east bank of it,
1081 and crossed over before we got to Bonestell's.

Q—How wide is that slough at the various points and parts?

A—It is of different widths; it has different widths at different points. It would average 50 or 60 feet wide from the line through the south line of Section 32. From there northwesterly it would average from 50 to 60 feet, and right near the end of it where the channel ceases, just before you get to the end of it, it is just about 20 feet; gets smaller for about one mile before you get to the end of it, and begins to grow
1082 smaller. Where the channel ceases, where I stopped my survey of it, it had just spread out into the tules. After October, 1880, I don't think I was there again until April, 1881, about the first of the month. I then found there was a small head of water running down the Buena Vista Slough. It was running from—I don't know where it was running from. I crossed it down below Head-quarters camp. It was running down there. It was coming down from the waste gate, I suppose. There was no other place for it to come from. The waste gate of the Kern Valley Water Company's Canal. I suppose it was coming from there.
1083 I didn't go up to see. I know of no other place where it could come from.

Q—How was the water in that slough?

A—Where I crossed the slough, or touched it, the water was all in the slough.

Q—Whereabouts was that?

A—That was in Section 32, T. 29, R. 24.

Q—How did you go to Section 32, T. 29, R. 24, from Wible's Head-quarters?

A—I didn't come from Wible's Head-quarters; I came from the east side of the swamp. I went in north of the end of the East Side Canal, about a quar-

1084 ter of a mile, I should say. There was no water there at the end of the East Side Canal at that time—none at all. I came from the Buena Vista Ranch. I started from Buena Vista Ranch, Sec. 20, T. 30, R. 25, and went northwest through Sections 18, 12, 1 and 2, of T. 30, R. 24. I commenced at Section 20, T. 30, R. 25, and then went northwest to Section 18, same Township and Range, through Sections 12, 1 and 2, T. 30, R. 25, to about the quarter-section post on the west side of the Section 2, somewhere in that neighborhood.

1085

AFTERNOON SESSION.

Q—I understood you to say, before recess, that you had, some time in 1880, October or September, been back on a portion of the slough north of Wible's Camp?

A—After I made the survey of that slough in 1880, in May, I went back again in October. I went along there on the east side of the slough. I went along to Sections 33 and 32, until I reached the bank in Section 32, T. 29, Range 24. I reached the bank
1086 about the south line of Section 32. I went up nearly due north, along until I got to the centre of that Section.

Q—Following the slough?

A—No, sir; not following close to the slough, but a short distance from it. I crossed Section 32 at some point, and got on to the west side, and went from there to Bonestell's house. From Bonestell's house I went northwest, probably a mile, not following the slough. We went pretty close to the slough, and then we went northwest up this swamp, and after we got probably a mile we turned and went east to the margin of the
1087 swamp. After going a mile from Bonestell's, northwest, we turned and went east to the margin of the swamp.

Q—Whereabouts is Bonestell's house; do you know?

A—The house is on the southwest quarter of Section 24, T. 29, R. 23.

Q—Point out here, if you please, the sections through which you passed.

A—I went through the Section 24, the southwest quarter, in a northeasterly direction, and through Section 23 into Section 14, to some point, I suppose, about in Section 14. I suppose it was a mile beyond Bone-

1088 stell's house. From there we went in a northeasterly direction towards the margin of the swamp, and from there over into Goose Lake Slough.

Q—What was your object in doing that?

A—My object in going across there was to get out; we wanted to come back home, and one reason I went down there was to see if there was a channel down in that part of the swamp. When I was there before the whole country was filled with water, so that I could not see it. The country was dry at the time.

Q—Did you find any channel there then?

A—No, sir.

1089 Q—None whatever?

A—No, sir; nothing that you could call a channel. There was one place that we crossed a pond; it was a basin; it was dry entirely; a kind of basin; no appearance of a channel.

Q—You found no channel going through theer at all?

A—No, sir; I found the condition there to be the same as when it was wet. We were in a buggy; we went completely around the pond of which I have spoken as coming to the end of. I crossed a pond, or what was a pond when there was water there, I sup-

1090 pose. It was a dry basin, a shallow pond; and coming into it at one end, the water had gouged out a hole, probably a foot and a half deep below the general surface of the ground; but where we crossed, it was just one dry basin.

Q—Did you see the end of this gouge?

A—I saw the north end of it: it was at the south end of the basin. At the north end it was just like the balance of the country through there, flat. I saw no channel beyond the north end of the gouge; the gouge was not through the basin that I speak of. It seemed

1091 as though the water had gouged out this hole down there and had spread out at the end of it; the end of it was higher than the basin; it seemed to be entering in there at the south end; the gouge was at the south end of the basin.

Q—How was the bottom of the gouge, compared with the bottom of the basin?

A—It was lower than the basin; it was about 10 feet wide, I should judge; about 1½ feet deep, as well as I could say.

Q—Whereabouts was that?

A—I cannot exactly locate it on the map; it is prob-

1092 ably northwest of Bonestell's house, three-quarters of a mile, I should think.

Q—When were you next down on that body of swamp land north of Wible's camp, of what you have depicted here as the slough?

A—I was down there again in April, 1881; it was on the 7th of April, I think; it was towards the first of the month. That was the trip I was speaking of just before recess. When I was down there I saw no water in crossing through there, going to that point. There was no water at that time at Section 2; had there been I would have seen it where I struck it. I struck it a
1093 short distance north of the northern end of the east side canal. From there I went a little north of west, through the swamp, to the head of Weed Island, I think, to about Section 32. From there I went northwesterly a short distance, and then turned and came back to the margin of the swamp again. I went in a northeasterly direction back to the margin of the swamp, and came out on Section 28—came out there near the corner.

Q—From Section 32, at the head of Weed Island, how far were you to the westward?

A—I did not cross the slough, but kept on the
1094 east side of the slough. I then came out on the east margin of the body of swamp land, and went back to Buena Vista Ranch that night.

Q—In going around there, what was your object in going down that way?

A—My object was to see if there was any water running down the slough, and to see if there was any channel through there. I wanted to post myself on the country over there. I saw no water running down the east side of the slough, no water at all, no channel. The next day I went back again, and went down as far
1095 as Section 20. I went over pretty much the same route that I went the day before through Sections 18, 12, 1 and probably 35; and then along the margin of the slough to the swamp land. From Section 20, I went west through the swamp land to the Bonestell house. I did not go to his house, but I went across Weed Island, south of Bonestell's house, a part of the way on the road.

Q—Was there any channel there that you saw.

A—Yes, sir.

Q—Whereabouts?

A—I crossed the channel through Weed Island.

1096 Q—Whereabouts?

A—I did not locate it exactly where I crossed it. It was probably on Section 30, or Section 25, T. 29, R. 23. It was only a short distance south of Bonstell's house, probably half a mile.

Q—Was that the channel you had meandered before?

A—Yes, sir. The same channel. That was the only one I saw. From there I continued in a westerly direction through the swamp land to the levee on the west margin of the swamp. I found no channel going from Bonestell's. I found some moderately high
1097 ground after we left this channel, grass was growing on it, and then we came to some pumps, or what had been pumps, some troughs there. And a short distance beyond the pumps we struck tules, and continued through the tules until we got within a short distance of the levee. Found a flat country with tules over the most of it, and grasses growing. I would describe the country as a tule swamp.

Q—I would like to ask you whether you found or saw any channel?

The COURT. You can ask the question.

1098 Mr. HAGGIN. Did you see any channel through there?

A—Not after I left the channel that I mentioned before. I went up on the levee of the Kern Valley Water Co's Canal; I have been down there again. I was there a few days after that; I don't remember exactly when; 2 or 3 days after. It was April 20th. I think that was April 20th. Then the last time I have described. I think I was down there 3 or 4 days afterwards; probably the 25th or 26th of April.

Q—Where did you go then?

A—I went to Bob Harrold's camp on the east margin
1099 of the slough, I think; that is Sec. 11, I believe, T. 29, R. 23. I went there to run some levels through the swamp land, making a profile of the swamp, in company with Mr. Fillebrown. We ran a line of levels through the centre of Sections 10, 9, 8 and 7, and a part of 12, and always in a due west line. Sections 10, 9, 8 and 7 are in T. 29, R. 23, and Sec. 12, in T. 29, R. 22.

Q—In running those levels from there, what did you do?

A—We found a flat country grown over with tules, almost the whole distance; sometimes would come to a

1100 clear place where there were grasses growing on the ground a little higher than the general surface of the swamp. In the centre of the swamp we crossed a pond. Then we ran on through to the west margin of the swamp. We found nothing but tules and a level country straight through. When we got near the levee of the Kern Valley Water Co. the land was a little more uneven, and there were some salt grass hills or knolls. In making that survey, we took an assumed elevation on the east margin of the swamp, and ran through until we reached this pond; then ran around the bank of this pond until we got opposite to where we had started to
1101 make the turn. We went around the south end of the pond; and from the western side of the pond we went due west again, on the same line we had been running on. The assumed elevation was 100. That was the Bench Mark there; put a stake into the surface of the ground, and took that as 100. We only knew approximately where it was. We could find no section corner there. We went through to the western side of the swamp.

Q—How did you happen to strike that particular starting point that you took there?

A—We were shown a corner of land where a stake
1102 had been burned up, and they thought that was the original corner there. They could not tell us which corner it was. It was pointed out to us as being the corner by Mr. Harrold. He lives near the point, about 200 yards from that point, and he pointed this point out to us, and told us he thought it was a corner; that he had seen a stake lying there.

Q—Did you drive a stake at that point?

A—A small stake we drove at that point for a bench mark, leaving the top on the same level as the ground.

Q—How did you make that survey?

1103 A—In the first place, I located this point at this stake, and we drove it with reference to the corner of Harrold's house, and I then sat the compass on the point that we supposed to be the corner, and took a due west course, bearing through the swamp. Then Mr. Fillebrown took the level, and I took the rod, and went along on this course that we had taken, and I went along with the rod and gave him the readings of the rod at every 100 feet, and he ran a level, and took the sights, and kept the notes.

Q—How did you measure the 100 feet?

A—Measured them with the wagon wheel, and by pacing, stepping them off.

1104 Q—Who stepped them off?

A—I did. I have been in the habit of making surveys.

Q—Has it been your custom to step off distances?

A—Yes, sir, frequently. In surveying ditches and canals I have run the grades for miles of ditches in that way, with no other measument than by pacing.

Q—You have been accustomed to doing that sort of work?

A—Yes, sir.

Q—You say, "by the wagon wheel." What had the wagon wheel to do with it?

1105 A—After going 500 or 600 feet, I would ask the number of revolutions we had gone, and compare my number of paces with the revolutions of the wagon wheel, so as to check my paces with the wagon wheel. Mr. Jackson was driving the wagon, I believe, and Mr. Dixon was counting the number of revolutions. We probably checked off with the wagon wheel every four or five stations. Our measurements would compare very closely with the wagon wheel. We checked very closely all of the way through. In the aggregate it was only out, I believe, 20 paces in four miles.

1106 The last time I checked was four miles, and it was 20 paces off.

Q—In a distance of four miles you came out within 20 paces of the wagon wheel, by record did you?

A—Yes, sir; we started from the east side of the body of swamp land on Section 11, and went westerly. I kept the memoranda of every turning point; that is whenever we moved the instrument we took a sight, and then moved the instrument up, and the rod-man remains in the same place until we set the instrument again, and get the height of the instrument in reference to that point; and I always took the elevation of those points.

1107 These points would be about 1,000 feet apart. We would read 500 or 600 feet in front; and then we would move the instrument and read 500 or 600 feet back.

Q—Did you, in going across there, make an examination of the notes made by Fillebrown?

A—Yes, sir. I compared my notes with his frequently, so as to check them. We checked them off all of the way through. In one instance there was some difference. I don't remember what it was; but it was merely a mistake in addition, and he corrected that.

Q—Did you examine it at the time the notes of Mr.

1108 Fillebrown, while the thing was fresh in your mind? Would you, from time to time, look at Fillebrown's notes?

A—Yes, sir; whilst the measurements were fresh in my mind. The Fillebrown notes were correct.

Q—Were Mr. Fillebrown's notes made in your presence?

A—Not all of them. They were made in sight of me. I had the rod and he had the instrument. I have examined that frequently, and I know they are correct. My notes are correct. They are all correct, as far as possible.

1109 Q—You say that after going a certain distance you came to a pond. Do you know how far that pond was from the point of starting?

A—It was 12,400 feet. That was the number of the station on the bank of the pond, 124. I have not the notes made on that occasion.

Q—After reaching that pond, what did you do?

A—We took the levels then right around the bank of the pond, following southward until we reached the south extremity of the pond; then we followed along the bank until we got back opposite a point that we had left on the line, on the east and west course. Go-

1110 ing around the pond, the country was an unbroken tule growth.

Q—Any depression around the end of this pond?

A—No, sir.

Q—Any channels?

A—There were no channels. We went around the south end. After getting around the pond, and on the east and west line opposite, we took a station about 100 feet from the point we left. The bank of the pond was nearer the point we had left. The first sight that we took opposite to that point was a little distance

1111 from the bank of the pond. It was 100 feet from where we had left the line to go around this pond, and within that 100 feet the pond lay. After getting around the pond we continued due west, until we got outside of the tules, and Mr. Jackson went ahead and found this stake; and we took a bearing from the point where we had the stake, which is four miles from where we had started from the stake, and drove up to it.

Q—Which direction was the stake from you at the point where you first took your bearings from the stake?

1112 A—I don't remember the bearing now. It was a slight deflection to the south. I don't know how far it was. I think it was about a quarter of a mile, a quarter or half a mile, I don't remember which. I made a profile of that work afterwards. It was made from the notes taken on that occasion. The top one on Exhibit L was that one.

Q—Is that a correct profile from the notes that you had upon that occasion?

A—Yes, sir.

Q—Correctly representing the country through which you made this cross section?

1113 A—Yes, sir; that is a correct profile. I made the profile. Mr. Fillebrown called out the readings, and I marked it down with a pencil as he called them out. We made it together, and it is correct of those notes.

Q—Does the profile correctly represent that portion of the country through which you ran those levels?

A—Yes, sir; according to those notes this is a correct profile, and upon that scale. The vertical lines are to represent stations in distance; between the vertical lines represents the stations in the profile, and the horizontal lines represents the elevation in feet.

Q—What is the distance from one vertical line to

1114 another?

A—One hundred feet. The fine horizontal lines represent one foot; the fine vertical lines represent 100 feet, and the fine horizontal lines represent one foot. I think this was April 27, 1881. I made another cross section through that swamp land the next day, April 28th; commenced at the northeast corner of Section 33, T. 29, R. 24; that would be the southeast corner of Section 28. We ran south, 16 deg. west, right straight through the swamp, until we reached some water down there and could go no further. We

1115 reached water on Section 4, T. 30, R. 24. We took a course from the southeast corner of Section 28, T. 29, R. 24 south, 16 deg. west; that was the bearing, to some point in that section. I don't remember the number of stations we went before we reached this water. In making this cross section that I have spoken of, the preceding one through Sections 10, 9, 8 and 7, we saw no water except in the pond I have referred to. On the line from the southeast corner of Section 28 we ran through Section 33, into some portion of Section 4, T. 30, R. 24. We found water spread out over the ground, so that the animals could not go any

1116 further; they bogged down. We sent the wagon back, and Mr. Fillebrown and myself continued on through the swamp with those levels; ran across the swamp until the tules got so thick that we could not get through very well, and the water seemed to spread out there very wide; so we took the level of the water surface, and made it as nearly at right angles to the swamp as we could, to the eastern margin of the water, which was spread out. When we reached this point on Section 4, somewhere in Section 4, I cannot say exactly where it was, the water was spread out over the ground; was just seeping and
1117 running along; it was not an inch deep in most places; just enough to spread out. We went on through that until we reached a pond of water that seemed to be about knee-deep. That was on Section 4, still keeping on the same course. Up to that point we kept the course. Then the weeds and tules were so high in our direct course that we had no way to get through them; we could not carry the wagon to mash them down; we went around through an opening, a slight depression in there. The wagon left us when we first struck the water, before we got to this point. Here we made a deflection north about 200 yards.
1118 Then we went on as nearly our same course again as we could, from that point. We could not get back to it, exactly. We were going through this water knee-deep until we came to where the water was running. We took the surface of the water there, of the depth of it, which was the deepest water we found in the swamp in crossing. I don't remember the exact depth. I think it was nearly waist-deep. It was 2 feet .7, I think. That was the deepest water we found. We had gone through the water, I should judge, about half a mile. We took the level of the water there, and
1119 then went through and took as nearly the same course as we could to the west margin of the swamp; and when we got near to the west margin of the swamp, we found the edge of the water, and then we continued on in the same way, the same course, sounding the depth as we went along. Its greatest depth was 1.4. Where we struck it, it was 2.7, I think, about waist-deep.

Q—Do you know where that was you struck that?

A—It was on Sec. 4, at some point. I can point it out on Map I. [Witness does so.]

Q—Going from the corner of Sec. 28, 16 degrees west, you would be 60 yards from that point?

1120 Mr. HOUGHTON—From what point?

A—From the point where we crossed the deepest water that was found.

Q—How wide was the deepest water?

A—It was probably 300 or 400 yards wide; wider than that. Where we first struck the point knee deep was first a continuation of that water. The surface of the water was the same all the way through there, and it got deeper and deeper until we got to this point. Then we went on westward, and the next deepest water we came to was 1.4, and it ran from there to nothing, there we reached the western margin of this water.

1121 Q—How wide was the whole body of water you crossed there?

A—I think it was a mile, or a mile and a quarter, from where we first struck it. When we got to the west side, we commenced at the water surface and took the same elevation as where we left it, and completed the levels on to the western margin of the slough over to the mouth of the canal. Making this cross-section, I was carrying the rod; the same as in the preceding one. Mr. Fillebrown was running the level, and I was making the notes the same as before. We ran this line exactly as we did the preceding one.

1122 Q—Making measurements in the same way?

A—Yes, sir; up to the point we sent our wagon back. I examined Mr. Fillebrown's notes as I went along.

Q—Were they correct?

A—I found them so as far as I examined them. I made a profile of that section. That is it on exhibit L; the second one. There are several depressions on that profile. The one on the seventh thousand feet is where the pond was; the water was .2 or .3 of a foot deep, grown up with tules. I did not go around that pond. The water was standing still; no current.

Q—What is the next depression?

1123 A—At the eleventh thousand feet. There is the point where we found the deepest water, 2.7. The water was some distance out from there; 300 or 400 yards, I think; at least 300 or 400 yards eastward. Before we came to that it was about knee deep outside of it where we took the soundings. The elevations are at the extreme end of this profile, representing the top of the levee, and top of the side canal. The highest represents the top of the Kern Valley Water Co.'s levee, and the other represents the top of the canal. That profile was made from the notes

1124 of Mr. Fillebrown. I made it. Mr. Fillebrown, I think, was present.

J. C. KEYES,

Re-called for defendants.

I reside in Los Angeles County; I resided in this county from 1877 to 1880, at Sumner. I was the telegraph operator at the Sumner Depot; I was there throughout the whole of 1879, until July, 1880; while
1125 there I made observations of temperature and rain-fall; that for the temperature three times a day; and the course of the wind and rainfall; and I made a memorandum of such observations; the memoranda were made at the time when the observations were made; they may not have been put down at exactly the same time; sometimes fifteen minutes or half an hour might elapse; a very short time; they were fresh in my memory at the time I put them down.

Q—Have you any memorandum of that?

A—Yes, sir; that is it, (producing a book); it is a book that the company furnished to keep these things
1126 in; by the Railroad Company; they are the original entries, and they cover a period for 1879 and a portion of 1880. Mr. Sampson took some of them when I was not there; no one else took any except myself and Mr. Sampson; I can tell what proportion of those I took myself.

Mr. HAGGIN. Q—So that all of these that are down there are either his or yours?

A—Yes, sir.

Mr. HAGGIN (to Mr. Houghton.)—Do you wish them pointed out?

1127 Mr. HOUGHTON—I understood that Mr. Sampson was to make a list of them, partly in red and partly in black ink. You can call them off from those lists.

Mr. HAGGIN. Q—Will you look at this, (witness shown copy furnished by Mr. Sampson), and tell me which are yours, the red or the black figures, and which are Mr. Sampsons?

A—The black ink; these are my own figures, and the red are Mr. Sampsons.

Q—How is it as to the month of February?

A—It is the same all the way through; the same way; and all of those that I took myself are correct; I have

1128 examined this list and compared it with the original; it is a correct copy; I have compared it myself with the original and I know it to be correct; I have gone over the whole thing, and checked them off, this morning; the entries in black were made by myself, and those in red were made by Mr. Sampson.

W. R. MacMurdo

Re-called and Direct-Examination continued.

1129 By Mr. Haggin. Q—Do you know whether that portion that was depicted on here is the channel you have described as the slough from Wible's Camp to Bonestells, on Map "I," whether that is shown on that second profile?

A—Yes, sir; it is shown at this point here.

Q—That is on the eleventh thousandth feet?

A—Yes, sir; from the south-east corner of Sec. 28, and then it leaves the slough, and at the seventh is the pond. This second profile is correct from my survey and notes; as near correct as can possibly be.

1130 Q—In going across there, and taking your stations every one hundred feet, how was it in the intervals between the stations, from one station to another, how was the general country.

A—If there was any unusual feature between the stations, we always took a note of any depression or rise; we would always take a note. We found none to take note of. I don't remember anything except this channel here which came between two stations. We took the bottom of that; I have not those notes at present. I took notes at every turning point so that we could make no mistakes. The intermediate points between the

1131 turning points I did not take; I called them out to Mr. Fillebrown, and he put them down. Those notes I can get for you; they are left at the ranch.

Q—Did you ever go back there again to either of those places where you made those cross-sections?

A—Yes, sir; I went back to one, to the first ones we made, running through sections 10, 9, 8, 7, and 12. I think it was on the 11th of April. My object was to get a more accurate cross-section of this pond that we crossed. I went from Bellevue ranch and went down the road towards Goose Lake, and came into the margin of the swamp near De Webber's, on Sec. 20, T. 29

1132 S., R. 24 E. My object was to go to Harrold's camp, where we went in before. From De Webber's I followed along the eastern margin of this swamp land northward until we got to Harrold's camp. We went into the swamp and took the same course that we started from, going in a due west course; went about two or three hundred yards on that course and we came to water spread out among the tules; and we were afraid to venture in with the animals and went around, followed around the edge of the water, going north-westerly. We had gone but a short distance when we struck the water again ahead of us. Then we had to go more
1133 to the eastward again, until we got to the edge of the water. We went then in a northerly direction and got around and started to go to the west, and continued along west until we got to Broder Island. We kept in on the high land then in a westerly direction until we got probably a mile and a half from the eastern margin of the swamp. Then we went back in a south-westerly direction until we got on the line again that ran through sections 10, 9, 8, and 7. We went completely around this water. It was spread out very nearly from the eastern margin; I should think about three hundred yards. I should say it was a mile and a quarter wide.
1134 We went completely around the water; when we struck that line again we were on the east side of the pond, and we reached there without crossing any water at all. We then went down to the edge of the pond and followed the line down and set up our instruments and measured the width of the water, and took the level of the surface of the water and the depth of this pond in several places, going across in a direct west line. The depth of the water was just about one foot. After making the cross-section of the pond, I drove around the pond, commencing at the point where we crossed it,
1135 and drove around the south end of it, going around the same end that we had gone in the first instance. We found it in the same state as it was when we were there before. I then went around towards the north end, went around the pond on the north end; I went completely around the north end.

Q—And how did you find that?

A—We found water down in the slough for a short distance, and then the bottom of this pond commenced to rise up until it got up on a level with the outside country.

1136 Q—Did you take any level at the north end of the pond?

A—Yes, sir; I took a level in the lowest ground I could find there in this line of this pond; and the top of that ground, or what would be called the bottom of the pond—if there was any there—that far, it was two feet higher than the water extended in this pond, and was about the same elevation as the surrounding country. I made a profile of this second cross section, and when I went back there the second time I found some of my former stakes as I had left them. This is the profile that I made showing this pond.

1137 (It is marked "Exhibit M.")

Q—Does this profile correctly represent the cross section through Sections 10, 9, 8, 7 and a portion of 12, which you have spoken of?

A—Yes, sir; that covers the whole of the first line run by me. This is made from the same notes with the addition of the notes that I took the second time I went to this pond.

Q—Does this depression, as seen at 12,400, represent the pond?

A—Yes, sir; that pond is 12,400 feet westerly from the east margin of the body of swamp land, and from

1138 the stake that we put there.

Q—Was there any channel east of your stake?

A—No, sir.

Q—What is the top profile on this Map "M"?

A—That represents the bank of the pond around the south end, starting from station 124; that is a part of the other profile; it is in the other profile.

Q—Will you explain profile "M" in conjunction with the other profile "L"?

A—This is the first profile (pointing to profile "L"). This represents the eastern margin of the slough at this

1139 point where we put our stake and started through and ran to station 124. Then we ran around the bank of this pond, and that represents the same portion of the slough that is on Exhibit "M."

Mr. McAllister. Q—Twelve thousand four hundred feet?

A—That is the number of the station on the first profile; and from there to this point here it is thirty-one stations. The stations from 124 commence with one and are numbered to thirty-one; and then we commenced station 125. There are thirty-one intermediate stations between 124 and 125, running around this

1140 pond; runs to station 31 and back to station 125 on the regular line. Station 31 going around the pond corresponds with station 125 on the main line running west through the swamp; and from station 125 westward this profile running to the west is the same as the profile "M." One of these profiles is made from left to right, and the other is made from right to left; I don't know what the difference is in the scale. The first one though shows a truer profile than Exhibit "M," because the vertical scale is more extended on Exhibit "L" than it is in profile "M." I can put this profile "M" upon the same scale that Exhibit "L" is on.

1141 Mr. McAllister. Q—Does Exhibit "M" in the first line show the pond?

A—Exhibit "M" shows the pond; it is exhibited from the top line on Exhibit "M;" we go directly across the pond, and in Exhibit "L" we go around the pond; both of them are profiles; both of them are profiles of the line through there, according to the notes, and both of them are direct lines; they are both profiles of a continuous straight line across; one with an addition to it of a passage around the pond on that straight line; they are both profiles of the same work exactly.

1142 Q—After making the second examination of this pond, whereabouts was that pond, do you think or recollect, on that map? Can you point it out—about what section?

A—I think it is on about Section 8; I won't be positive; I went westward a short distance from the pond, probably a half a mile, and we found it in the same condition that it was when we left there before; saw no water. The most extreme northern end of the water that we went around was farther north than where we struck the pond. The line running directly east and west from the pond was through the water; a line run-

1143 ning at right angles with the body of the swamp land would come close to the water—where the water was at that time; the water was nearly as far as Broder's Island, right at the edge of it, at that time; the southern end of the pond was a quarter of a mile south of where we crossed it.

Q—Have you been down on that portion of this body of swamp land north of Wible's Camp at any time since this that you last mentioned—this last cross-section?

A—Yes, sir; I was down there about a week ago; I think it was on the 15th of May; I went down to De

1144 Weber's, and went across the swamp land at right angles to the general direction of the swamp, following the old road from De Webber's on Section 20.

Q—Is the De Webber place marked on the map Exhibit D?

A—Yes, sir; it is on Section 20, T. 29, R. 24; from De Webber's we followed along the old road that used to go through the swamp there; followed it around until we struck the slough there; then we went up to Bonnestell's house and got across; I think the road dotted on Map D is the way the road runs, but I don't know it; we followed that until we struck the slough; then we
1145 went to Bonestell's house, and crossed near Bonestell's house; and then we went back down toward the pump that is marked on that map; from Bonestell's house we went north, probably a quarter of a mile; we didn't see anything but tules and water; we got into the water, which was running out beyond Bonestell's house, and we turned around and came back; it was deep in some places, probably a foot deep, and shallower in others; we didn't go to where it was more than a foot deep.

Q—Did you see whether that water was in the channel or not?

1146 A—It was not in the channel where we went, which was about a quarter of a mile north of Bonestell's; we then came back towards the pumps on the west side of Weed Island.

Q—There are some pumps marked here on the map "D;" look at this map and see if you can fix them.

A—I think the pumps are there over on Section 26; that is the direction we took from Bonestell's; we crossed Weed Island, and crossed in places where the water was running in from the south somewhere and filling up the holes—could hardly say it was running at all; it was spreading out there in low places, and there
1147 was very little current, and the current was setting northwards wherever there was any.

Q—Following in a channel?

A—It didn't seem to be; we could not see any channel for it to follow.

Q—How far was the water before you reached the pumps?

A—It was about a quarter of a mile; there were some little places in between where we first struck it before we got to the pumps that were above the water—some of it out—but the most of it under water. We got into

1148 the old road, and followed the old road I think about a quarter of a mile or so before we reached the pumps. There was no water at the pumps; they were on high ground. We then went west, and got into the tules, or margin of the tules, on the west side of Weed Island, only a short distance after leaving the pumps, probably one or two hundred yards; there was water in the tules from there to the west margin of the swamp—one sheet of water; the deepest place we found was up to the hubs of the buggy; that was near the west margin of the tules, just before we left the tules; we didn't go around that deep place—drove right through it. I had been
1149 there before; I think it was the 20th of April that we went across there before, and crossed a little south of where we crossed this time I am speaking of now. In crossing south of it from the edge of the tules where we started in, until we came out, there was almost an unbroken growth of tules right straight through; the land was pretty near level all the way through.

Q—Any channel?

A—No, sir, I think not. The deep place I speak of was on the west side; I have never been to the north side of that deep place; probably it was sixty feet wide, the deepest part of it; it was a short distance where it was
1150 up to the hubs from where it commenced to get deep; it was very shallow all the way through until just before we got to these deep places, and from there on it was sixty feet from where it commenced to deepen until where it came into shallow water again.

Q—Was there any current through there?

A—I don't think there was; probably a little current, a very little if any; I think there was a slight current there when we crossed it the last time. After crossing we went west until we got on to the canal or levee; we did not see the corral which is marked on the map "D;" we went further south than where the corral is marked,
1151 and came out a short distance south of that; I didn't see any corral. After we got across to the west side we followed the levee down to the headquarter camp, and then went to the Buena Vista Ranch. There was water in the canal.

Q—Did you see any water going from the canal anywhere along the levee?

A—No, sir; I saw no water going from the canal along the levee until we got to the waste-gate, where some water was running out of the waste-gate; I saw water running there when I was there on the 20th of

1152 April; water was going out of the waste-gate at that time. I met Mr. Mendell and Mr. Fillebrown at the waste-gate; they were making the measurement of the water and of the bank down there at that point. I noticed generally the amount of water flowing through there, and looked at the gate and saw the water flowing through, but didn't take any measurements myself; I noticed generally the volume of water going over there; I noticed this water the last time I was down there; I think it was about the same amount as when I was down there and Mr. Fillebrown, Mr. Schuyler, and Mr. Mendell were there on the 20th of April; it looked to
1153 be, as near as I could judge, without taking actual measurement, I think about the same amount of water. I went back again to this slough, north of Wible's camp. The next morning, I think it was May 15th, we went down to the point where the levee of the Kern Valley Water Co. crossed the slough; and from there we followed up the bank of the slough, the right bank, the east side of the slough; we went up to Crocker's place.

Q—Whereabouts is that?

A—It is on Section 10—I believe it is on 10; or a part on Sec. 15 and a part on Sec. 10.

1154 Q—The east bank of the slough near Crocker's house; how did you find the slough? what did you see?

A—We found a slough there; a pretty good slough from the levee up to Crocker's place.

Q—Did you see any water there?

A—Yes, sir; there were some ponds out there on the west side, between the slough and the bank, and then just before we reached Crocker's place, on the east side of the slough, there was some water running out of the slough into the pond on the east side of the slough. That was where Mr. Norton is living now. The Crocker
1155 place and the Norton place are the same.

Q—Then, going along the east bank of the slough as far as the Crocker place or the Norton place, what did you do?

A—I crossed over to the west side and followed the west side of the slough, then up to the south end of Weed Island.

Q—You crossed over to the west side; in following along the west side of the slough from Crocker's place did you go along the levee that you mentioned before?

1156 A—No, sir; the levee that I spoke of before was a levee running across that swamp.

Q—You described a levee somewhere along in there on the west bank of the slough?

A—Yes, sir; it commences near Crocker's barn and follows along the west bank of the slough, and follows the direction of that slough, which comes down right in here on section 10, the south line of section 10, runs along through section 10 and out through the north end, probably a short distance north of the north line of section 10; it follows the general direction of the slough.

1157 Q—What purpose was that levee answering there?

A—It seems to keep the water off from Crocker's place. The ground is low to the west of that levee. There was cultivation to the west of it. Mr. Crocker had a field under cultivation there, and I think the levee protected that field. In going from Crocker's place we went along that levee; it is higher in some places than in others; where it crosses the low ground it is higher than it is where the slough has a good bank.

Q—Is there any water in that slough?

A—Yes, sir; the water was in the slough at that time.

1158 Q—Was there water in there against the levee?

A—Yes, sir; there was water in there against the levee in a good many places.

Q—Could you see what the effect would have been had there been no levee there?

A—A good deal of the water in the slough would have gone out over the west bank of the slough if the levee had not been there; I don't know whether it would have gone to where it is cultivated now; I think some of it would have gone to the cultivated land. I followed that along for a mile; I think it went through the north line of section 10; I went to

1159 the northern end of it. The northern end of it was all low, and it was overflowed at that time; the water was on the west side of the levee, in the slough, before we reached the end of it. There were some ponds soon after I passed Crocker's fence; soon after I left the barn, probably a quarter of a mile from his barn there was some ponds there. And then, after going down a short distance further, the water was all over that country.

Q—How far was that channel overflowed before you reached the end of the levee?

1160 A—I think it was probably a quarter of a mile; a quarter of a mile south from the northern end of the levee, I think.

Q—In going along that levee did you see any water at all to the eastward of the slough?

A—After crossing the slough.

Q—Yes, sir. After you crossed the slough and got on to the levee, could you see across the slough to the eastward?

A—Yes, sir; I could see across the slough to the eastward in places. I could not see very far for the tules, but the banks were low in places and we could
1161 see that the water was right up against the tules; we could not tell what kind of a current it had, or whether much water was running in it or not. It was all in the tules.

Q—That was to the eastward of the slough itself, was it?

A—Yes, sir.

Q—Then you could see that the water was both westward and eastward of the slough?

A—Yes, sir; from the lower end of the levee; after reaching the northern end of the levee, we continued
1162 up as near the bank of the slough as we could get to it; the water was deep, probably waist-deep off from the bank, and the overflow running through the tule from knee-deep to waist-deep; and we followed around and went into the channel at several places, right through at the end of the levee. There was water running around the end of the levee, and outside the channel of the slough the water was going in almost every direction; the most of it was going westerly, running out towards the tules, and into the tules on the west side of the levee. We went out into the water where it was running [showing on Map D]. We went from the end of
1163 the levee up to this point of the slough here on Section 3, between Sections 3 and 4; we went almost immediately northward; I don't know whether that line of the levee runs along where the words, "located from actual survey," are or not; it was about that way; followed around the general direction of the slough pretty much as those words run; we went from the north end of the levee into the deepest water we could find; it was waist-deep, nearly up to our shoulders; we were in the water from the time we left the end of the levee until we got to Weed Island.

Q—How far up is Weed Island?

1164 A—Weed Island extends down to Section 32; a little beyond Section 32; after reaching the point which is marked "Central Cut" on the Map "D," we came down along the banks of the slough, in the water all the time; the surrounding country was all grown up with tules, and the water was all spread out all over the tules.

Q—Did you go into the channel of this slough—into the middle of it?

A—Yes, sir; the water was waist-deep, and from our waist up under our arms; the banks, most of them, were under water; some of them six inches high above the water.

1165 Q—Could you trace the banks easily?

A—No, sir; not at all.

Q—How did you know where the banks were, then?

A—The water was shallower; if you went to either side you would find the water shallower than in the channel; that is the only way we could trace it, and by the tules; we branched out from the slough around into the tules, probably half a mile; the water was spread out all through there, and tules grown up and dense; we found no channel through there.

Q—Then you followed the slough you have described up to Weed Island?

1166 A—Yes, sir; I don't remember how many times we branched out; we were prospecting around in there all over that place; sometimes we would get into the channel, and then strike out again, and strike the channel somewhere else further down; and then we would go back, and follow around, back and forth, through for half a day.

Q—Then, when you got to Weed Island, whereabouts did you go to on Weed Island?

A—We crossed the slough, then, back to the east side, and from that point we went east; on Weed Island we came to ground that was above the water; high
1167 ground and dry. Then we crossed the slough to the east, and went on the east side of the slough back to the east side of the swamp, and to the end of the east side canal, following the line of the ditch through there.

Q—Will you point out on Map "D" about where you went?

A—We came on the west side of the slough until we reached this point here on Section 31; on the southeast quarter of Section 32. We went from there down to the corner of Sections 32 and 33; that would be the

1168 southeast corner of Section 32. From there we went west along the north line of Section 4.

Q—Where did you find the canal that you speak of?

A—That was along on the north line of that Section 4, until it got pretty nearly to the corner of Section 4; then it bore off to the south and ran through Section 3. It is a ditch part of the way and a levee part of the way.

Q—Going through from the southeast corner of Section 32, Township 29, Range 24, did you find any water before you got to the east side?

A—Yes, sir; the water was along in this cut or ditch
1169 up against the levee and was running through in places; there was water on both sides, and the water was south of us; it was all along against the south of this place.

TUESDAY, May 24, 1881.

Testimony of

W. R. MACMURDO.

1170 Mr. HAGGIN—Did you make that profile I asked you about?

A—Yes, sir. (The profile is produced and marked "Defendants' Exhibit N.") That is the same profile that was on this paper marked "M," over the same ground; I made it; it is made from the same notes as the other one; over the same straight line, leaving out the profile of the bank of the pond, around the south end of the bank of the pond; this is a straight line across from one side of the body of the swamp land to the other.

Q—Did you make this from actual notes?

1171 A—Yes, sir; those notes were made upon the occasion of the taking of the levels through there; the notes are correct; it was made from Mr. Fillebrown's notes and my own notes; I examined Mr. Fillebrown's notes frequently, and I knew them to be correct at the time; this profile is made from those notes.

Q—Now, about this portion here, this depression which you call a pond, how was that made?

A—That was made from the notes taken by myself upon a subsequent occasion when I went down there. This upper line (referring to Exhibit N) is a profile around the bank of the pond, the south end of the pond;

1172 this is made upon a scale of twenty feet to the inch vertical scale, and 400 feet to the inch horizontal scale; the proportion of the vertical to the horizontal is as twenty to one; if it was represented on a true scale it would show no inequalities in the land whatever, and would require a much larger piece of paper—twenty times the length. I took the lowest depression at the north end that I could find; there are elevations or points around the pond where it is lower than the north end of the pond, and the water would spread out at some points along on the bank of the pond. If there was any inlet to this pond at the south end or outlet,
1173 that would appear upon this smaller profile. The distance in a straight line from the extreme southern portion of the pond to the place where we ran across it was about fifteen chains; I think the south end of the pond was 500 or 600 feet wide from east to west. Then this upper line represents the west course of about 500 or 600 feet. If there was any inlet to that pond it would appear within that 500 or 600 feet.

Q—You spoke yesterday of finding, when you went up around the end of this, that is depicted on this Map "I" as a slough; it being about the month of October, 1880; having gone around and come to a flat
1174 place, with a little gouge in it, you said, at this southern extremity. How wide was that gouge?

A—Ten or twelve feet is my recollection of it now; I don't think it was over two and a half or two feet deep; I think its general course was east and west; I could not tell, though, because I was not surveying at that time; I was just going across there nearly at right angles to the general direction of the slough, as well as I can remember.

Q—Nearly at right angles to the general direction of the slough. What slough do you mean?

A—The swamp.

1175 Q—By the use of the word "slough" there you mean the whole swamp, did you?

A—Yes, sir.

Q—What was the general appearance of the "gouge" you mentioned?

A—It had almost perpendicular banks; looked as though a large body of water had gouged out there in pressing through. The bottom of this pond was even; it was pretty smooth; and the bottom of the gouge was rough. As regards the bottom of the two, I don't know exactly how to compare the two; the gouge was, I think,

1176 considerably lower than this basin; if water had run through, I think some of it would have remained in the gouge before it would have gone into the pond. The gouge seemed to be cut out with the general level of the ground; seemed to be just gouged out. It was lower than the balance of the country around there, as well as I could judge. I don't remember whether there were any alkali spots around there or not, but in other spots all through the swamp I found alkali; I don't remember whether there was alkali at this gouge or not; I didn't examine that particular spot with regard to that.

(The Reporter reads, at the request of Mr. Haggin,
1177 the last part of the testimony of the preceding day.)

Mr. HAGGIN—What day was that—on Sunday or Saturday?

A—That was on Sunday; it was the second day I went down there; I went along the levee, on Section 3, Township 30, Range 24; we went very near to the East Side Canal; I don't know whether that levee connects with the East Side Canal or not. We left the levee before we got there; it ran into some high salt grass hills; the levee was disconnected as it ran through some high ground; it was only between the hills that there was a levee built.

1178 Q—Whereabouts would that levee strike the East Side Canal?

A—Some distance south of the present terminus of the East Side Canal, probably half a mile. Had water been running in the East Side Canal, and run out of the northern end of it, this levee would have prevented it from running south, I think, and kept it north of the levee. I saw no water till I got to near the East Side Canal; there was some water there, running out of the East Side Canal; running out near the end of the East Side Canal; running out north of where the levee was.

1179 After coming to the East Side Canal, we went down the bank of the East Side Canal for some distance, south along the west bank of the canal; we found no water running out; went about half a mile or three-quarters of a mile to the weir on the East Side Canal; went on the east bank after reaching this weir; there is a side gate south of that on the east bank of the canal; we passed one of those side gates; probably passed two of them; I saw no water running out of either of them; there was very little water in the canal there. After crossing the canal, we went over towards Section 12, T. 30, R. 24; left the swamp land; I did not go back

1180 any more; I have not been there since. When I was down there and struck the slough by Wible's Camp I did not notice any water at the waste gate; I didn't go to the waste gate, but I noticed just below where the levee crosses the slough that the water was running in the slough; I found running water there.

Q—Then you had been all along this slough from Wible's headquarters up to Bonestell's upon several occasions, it seems. How much water, do you think, will flow down that slough to Bonestell's before it will run out anywhere?

A—Well, a very small head of water would run
1181 through there without wasting at the sides; I don't think that over a foot in depth of water would go through there without some of it running out.

Q—What amount of water? How many cubic feet per second?

A—Well, I think 20 or 30 feet per second. Running through there some of it would waste out in places, on the sides of the slough.

Q—Suppose you turn in sufficient just not to waste out of the slough, just to go into the slough, without going out, to fill up to the top of the low places, would that amount of water run to Bonestell's?

1182 A—It depended on how long they kept it running; it would take some time for it to run through if you turned it in while the slough was dry; it would take some time for it to run through, for a good deal of it would soak into the ground; it would run very slowly; a small head would run very slowly; a large proportion of it would soak into the ground, and it would take some time to reach there, because the slough is very crooked, and it is some distance.

Q—Suppose you turned in 100 cubic feet per second from that waste gate near Wible's Camp, how would that water flow, from your observation?

1183 A—Well, sir, a part of it would go down the slough. I think the great part of it would flow over the sides of the slough, over the banks, and spread out over the country, all through the tules. All that went through the channel running through Weed Island would go beyond Bonestell's a short distance, and then would spread out in the tules, and spread all over the swamp in every direction.

[The witness' attention is called to map "H."]

Q—Do you know anything about that map "H"?

1184 A—Yes, sir; I know that it is a map of the end of Kern River and a part of Buena Vista Slough.

Q—Is that map correct?

A—Yes, sir; it is substantially correct; the beginning of the Kern Valley Water Co.'s canal is about correct on that map. The levee that I speak of as running across the slough is marked on there; that levee extends eastward two or three miles, to the northeast corner of Sec. 19, T. 30, R. 25. The levee at Coles' is substantially correct; it extends about a mile and a half east, and on the west it extends a short distance, and runs out to the high ground.

1185 Q—What are those channels marked on that map; that is this one dotted here and there through Sections 22, 21, 20, and a portion of 19 and 20?

A—That is what is called the north branch of Kern River; sometimes called Gage Slough.

Q—And the next one there, through a portion of Sections 23, 2?, and 27, that is marked in blue, running south to the dividing line between 28 and 27?

A—That is the middle branch.

Q—And the other is what?

A—The south branch of Kern River.

Q—And what is the yellow one through 28 and 29?

1186 A—That is the continuation of the middle branch, which is filled with sand in many places; almost entirely so. The course of the water in Kern River, from Tracy's crossing down, is all of it continuous down Kern River until it reaches the forks on Section 23; there it divides, and a part goes down the south branch and a part goes down the middle branch; that which goes down the south branch continues in that branch down to Cole's Bridge, and empties into Buena Vista Slough at that point. The part that goes down the middle channel runs down to Sec. 28, near the line be-

1187 tween Secs. 28 and 27, T. 30, S. R. 25 E.; then it runs from there in a southerly direction to the south branch, and continues in the south branch down to the slough, and empties into the slough near Cole's Bridge.

Q—Well, after reaching Cole's Bridge, where does the water go to?

A—A part of it goes toward Buena Vista Lake and a part of it northward toward Wible's camp.

Q—Do you know what proportion runs to the southward and what proportion runs to the northward?

A—A little over two-thirds runs southward towards the lakes.

1188 Q—How is the levee there at the slough, the one at Cole's Bridge; is it open?

A—Yes, sir; you mean the one at Cole's Bridge; there is a combined bridge and weir there; the weir is open; I don't know about the weir being entirely open. There is brush and other obstruction in the slough immediately north of this weir; it prevents the water from flowing freely through. I have had something to do with constructing weirs; I know how they are built generally; there are a great many different plans. I could not say exactly how that one is built at the bridge; that is the part that is under the ground.

1189 Q—What is the object of that weir, do you know?

A—I can only say what I suppose. The weir is constructed in such a way that I suppose it is to hold the water from going towards Buena Vista Lake; the rafters are inclined at an angle, and the slope is towards Buena Vista Lake, so that the presure of the water on the side north of the levee would be the proper way; that would lead any one to suppose that that was the way the water was intended to be held against the weir; that the water would be coming from the north; would stand higher on the north side than on the south: the weir has upright sides to it, and the floor made of boards;

1190 the portion of the weir to regulate the water is composed of rafters inclined at an angle of forty-five degrees to the plane of the floor; the angle is towards the south; that is, the rafters are nailed to the floor at the north end, the top of them further south, so if you stand just north of the weir the bottom will be nearer to you than the top. That leads me to think it was put there for the purpose of stopping the water from running southward; for, if the water were to back up on the other side next to Buena Vista Lake, it would raise the boards right up. If a weir were constructed for the purpose of preventing the water going into the lake

1191 or preventing it going out, you would have a very different construction from the present weir, I should think; in fact I know it would. It would probably be constructed with upright posts and boards on either side, so that the water could be held up on either side. I have taken levels in different places on the river near that point; I have taken them north of that weir and about where the canal starts from that slough; I took levels on the point where the canal leaves the slough, and also at the point at the bottom of the slough near Cole's Bridge; I assumed the elevation of the floor of

1192 the headgate at the Kern Valley Water Company's to be 100 feet, as marked on Map H, at the extreme northwest corner of Section 15; that was the floor of the headgate below the general bottom of the canal on the upper side of the gate; the general bottom of the canal was a little over three feet higher; three feet and a fraction; the elevation at the point where the canal leaves the slough on Section 14, was about 104; I don't remember exactly what the elevation at the mouth of Gage Slough; it was 108 and a fraction; less than 109 and more than 108.

Q—Do you remember what the elevation was at the
1193 mouth of the middle branch in the slough?

A—It was 109.8.

Q—Do you remember the elevation in the mouth of the middle channel of Kern River?

A—No, sir; I don't remember it; it was 113 and a fraction in the mouth; it was higher than the bed of the slough. Just north of Cole's Bridge the elevation is 111 and a fraction; 111.3 I think; just south of Cole's Bridge it is between 103 and 104; I don't remember the fraction exactly.

Q—Now, from your observations of that country, your knowledge of it, what would have been the flow of
1194 the water of New River if this levee had never been constructed there at Cole's Bridge—the levee, dam, weir, or whatever this artificial obstruction may be?

Mr. McAllister—We think it would be better to reserve the objection to that, your Honor, on the ground that it is a subject on which he cannot possibly express his opinion; and on the ground that his testimony is irrelevant and immaterial.

Mr. Garber—What is the first ground?

Mr. McAllister—It is a subject upon which he cannot express an opinion as an expert.

1195 The Court—The objection is overruled.

[To which plaintiffs except.]

A—I thnk the greater portion of the water in Kern River, in fact nearly all of it, would have come down to this point near Cole's bridge, would have entered the slough at that point; and the greater portion of this water, would have gone towards Buena Vista Lake. Probably some of it would have gone toward the north.

Q—Assuming that the lakes were low, what would have been the condition?

A—I think the greater portion of it would have gone towards the lakes?

1196 Q—You mean that the water that came in those south branches I suppose?

A—Yes, sir.

Q—Suppose some water came down the Middle Branch, what do you think would have been the course of that?

A—That would depend on the amount of water that was going down the South Branch. If there was a large amount going down the South Branch, and a small amount going down the Middle Branch, it is probable that coming from the South Branch, some of it would have gone towards the north and
1197 would have prevented any water from coming back from the Middle Branch towards Cole's bridge. It depends a great deal upon the state of the water, the amount of the water that is there. Under some circumstances it is probable that the water would have to go towards Buena Vista Lake—a part of it towards Buena Vista Lake, and a part of it to the northward,

Q—What water is that you are speaking of?

A—The water from the Middle Branch.

Q—I am of course assuming, Mr. Macmurdo, not an unusual flow of water.

A—I think it would be then as I stated it at first.

1198 Q—Then you think under those circumstances that if that levee had never been placed there at all, and everything left in a state of nature, as it was prior to the construction of the levee and the dam, bridge or weir, whatever it was, that the water which came down here, some of it would have gone to the lake, and some of it would have gone north?

A—Yes, sir.

Q—What proportions?

A—I think over two-thirds would have gone towards the lakes. The remainder would have gone northward.

1199 Q—Do you know any thing of the Calloway canal?

A—Yes, sir. When I first remember anything distinctly about it was in 1876, or the latter part of 1875, near the point where it leaves the slough. I saw it in the spring of 1876; at various times during that year, and in 1877. I could not say exactly how often. I was very frequently absent, backwards and forwards. I saw it in 1878; saw it often. I was there at different times throughout the year frequently. I was there very often during 1877. I don't remember seeing any work done on it in the Calloway in 1875. In 1876 they

1200 were working on the canal when I went there the first time. I remember being there in 1876; early in the spring; and they were at work on the canal at that time. Every time I saw it in 1876 they were at work on it. I think they were at work on it every time I saw it in 1877. Sometimes I would cross it in p'aces where they were not at work at the time. I was running levels on the canal very frequently; laying out a canal and staking it out, and sometimes running grades. I was running these levels in connection with the work on the canal. I was staking out the line of the canal. I have crossed the canal frequently at different points
1201 where they were not at work. I was at work on the canal in 1878, building some side ditches and irrigating from the canal. I was irrigating in 1878 on Section 19, T. 29, R. 27, and from that point out as far as the point on the canal opposite Lerdo, or Section 27, T. 28, R. 26. I was not irrigating there in 1878. I only irrigated out as far as Section 35 in that township in 1878. I irrigated about half of 35. That was in March; I think sometime in the spring. A crop was made in 1878. The canal was constructed beyond this Section 27; some distance beyond that, I think. Sec-
1202 tion 35, what I irrigated on, is in T. 28, R. 26. I was irrigating a part of Sections 18 and 19, T. 29, R. 27, and a part of Section 12, T. 29, R. 26, and a part of Section 1 in the same township, and a part of Section 35, T. 28, R. 26. That was in the spring of 1878. I was out there in the fall of 1878, irrigating; in the winter. I think, just before Christmas. We irrigated then as far as Section 27, T. 28, R. 26. I was out there also in the spring of 1879. I know where what is called Poso Creek Settlement is. It is in T. 28, R. 25. I think it commences at Section 3, T. 28, R. 25, but I would not be positive
1203 about that. I don't remember where the first house is. It is in that neighborhood there. I mean the first house going northward. From there up to Poso Creek going along on the canal on different sections there, several different sections on the north of Poso Creek, I don't know that I can give all of the sections that these settlers were on. I have been over the ground frequently, but don't remember positively as to the different sections. The first tenant out there is a man named Steinman. I don't know what section he is on.

Q—Give me those that you know.

1204 A—There is Section 3, T. 27, R. 25; Section 34, T. 26, R. 25; Section 27, T. 26, R. 25; Section 9, T. 27, R. 25, and there are some other places in the different sections. There are a good many in there; they are all in about the same vicinity. I have been to the end of the canal where it crosses Poso Creek several times. There are several persons north of the creek; a man named Cressy; I think he moved there in 1878. I first knew him there in 1879, the early part. I could not say positively if he was cultivating any land, because I was not at his place then. I know he was living there; I have been out there in the neighborhood of his
1205 house.

Q—Did you see any irrigating land there in 1879, in the spring of 1879?

A—Not that far down. Cressy had a crop in 1880. To get a crop in 1880 he would have to put it in in the fall and the winter of 1879–80. I know he used water to irrigate that crop, in 1880. The first thing to raise a crop out there is to build ditches and build checks for irrigating the ground after it is sowed. Then they plow the land and sow the grain in the fall or winter. A crop is put in as soon as the ditches are built; just as soon as it is convenient to do so after building the
1206 ditches and checks. There is no use putting in a crop without they are able to irrigate it, and if they build the ditches, they know how much they can irrigate before they put the crop in. Frequently they plow some of the land before they build ditches and checks. I don't know what section Cressy is on. It is about two or three miles from the main Calloway Canal north of Poso Creek. I think Mr. Hayes is the person who lives next to him. He lives on the south side of the creek, nearly opposite, nearly the same distance from the canal; 2 or 3 miles. He was there in 1879; I saw him there in the spring. I didn't see his crop in 1879; in
1207 fact, I was not on that part of the canal in 1879. I was out as far as the creek, where the canal now crosses the creek. I met this man frequently out in that neighborhood. When I was out there in the spring of 1879, the canal was constructed very nearly to Sec. 3, T. 27, R. 25. It was early in the spring; I think it was in January sometime. I was out there again several weeks after that. I was not out that far in the month of March, 1879. I think I was out there in February, but I don't remember exactly the time. I don't remember how far the canal was then. In Jan-

1208 uary it was very nearly to Sec. 3. When I was out there in January the water was not to the end. There was a dam in just before we reached the end, and the water was as far as that. The water was somewhere near the centre of that Township 27, R. 25; probably Sec. 16. I was out there again during the summer of 1879. The Poso Creek settlement started first in 1878, if I remember right. I have never heard of crops being raised out there without irrigation. I know what the soil is out there. I know that no crop could be raised out there without irrigation. To raise the crops that were raised out there, they got the water
1209 from the Calloway Canal; all of it. I know the Kern Island Irrigating Canal; first knew it in 1875. Saw water in it then. It was in the neighborhood of Bakersfield, between the mill and the head of the canal. I saw the canal out at the mill; I saw it where the road crosses the canal going from Bakersfield to Sumner, and about the railroad where the railroad crosses it, and at other points. I saw it frequently between 1875 and up to 1879.

Q—How did the amount of water in that canal, when you first saw it in 1875, compare with the amount in it the present year?

1210 A—I think it had as much water in it when I first saw it as it carries now.

Q—As much water as it carries now?

A—I don't know, sir, how much it carries now. I know the Farmers' Canal; I have seen it frequently since 1875.

Q—How does that compare now with what it was in 1875?

A—What I knew of the Farmers' Canal in 1875 is dammed up now, and there is no water running in it; that was the portion between the head-gate and where
1211 it empties into Panama Slough. It was dammed up in 1880.

Q—Do you know anything of that damming up?

A—Yes, sir; they dammed it up to keep it from flooding the country below there. The head-gate was washed out. The river was high, and there was danger to the country down on the Cotton ranch, and on this canal, being flooded; it was dammed up to prevent water from going down there.

Q—Did you, during the year 1875, see New River at all?

A—Yes, sir; I saw it frequently in 1875. I saw it

1212 several times below the Pioneer Bridge, and at the bridge where the Pioneer Bridge is now. I saw it in 1876 below the Pioneer Bridge very often. I was there frequently. At times when I saw it in 1876 there was a great deal of water there, as much as I suppose there was in 1875; a good deal of water in both years. I saw it in 1878 below the Pioneer Bridge. There was as much water there in 1878, I think, as there was in 1876 or 1875; probably more. I saw the river down below the Pioneer Bridge, New River, in July, 1876. There was considerable water there then. The river was not fordable there in July, a portion of the time. I have
1213 seen that same portion of the river below the Pioneer Bridge in the year 1880. At times in 1880 there was a good deal of water there; at times there was probably as much water as in 1878. I don't think there was quite as much as in 1880. The banks were full, however. It was bank-full in 1880. I have seen it this year. There was a considerable amount of water down there this year; as much as in 1880, probably. I have not seen it this year when it was at its highest. I think there was as much water down there this year as in 1880. I don't think there is as much water there as
1214 there was 1876. I saw the water in the river the whole year of 1876, below the bridge, at different times, very frequently. In August, 1876, there was very little water down there. I have been up the river and above the head of the Beardsley Canal; been up as far as the cañon; that is, where the water comes out on the plains. I suppose it is 10 miles above the head of the Beardsley Canal, following the river. It was 12 or 15 miles. The Beardsley Canal heads on Section 3, T. 29, R. 28, and going up the river I saw islands above the head of the Beardsley Canal, formed of sand, and willows growing on them. I have seen islands below the head of the
1215 Beardsley Canal in the river; the same kind of islands; sand-bars and willows growing on them. And there are a good many islands above the head of the Beardsley Canal; the bed of the river is nearly filled with islands, and channels between them. In some places the river has frequently islands all of the way across, and narrow channels between those islands, and water running through.

Q—Now, I would like to come back to this slough again, and these branches of the river. You stated that you thought there was about two-thirds of the water flowing down there now, and you also stated

1216 that you thought that if these obstructions had never been there, there would be two-thirds of it going southward to the lakes. Do you mean by that that these obstructions have made no difference in the flow of the water?

A—No, sir; I think there is a considerable difference made by these obstructions.

Q—You think that there is a considerable difference?

A—Yes, sir.

Mr. McAllister—You mean the obstructions at Cole's bridge? You were talking about that.

1217 Mr. Haggin—At Cole's bridge, yes, sir.

The Witness—Yes, sir; I was down about the canal of the Kern Valley Water Company in 1878; I was south of that on the lower levee, on the slough between the two levees. I saw a great deal of water in there in 1878; it was in the spring, some time; spring and summer. I was around the margin of the swamp land. I saw a good deal of water; I saw the water north of the lower levee. There was a considerable lake there of water; it was standing up a good deal higher on the north side of it than it was on the south side, and there was some water in the tules

1218 around the margin of the lake—Buena Vista Lake, I mean. I was not on the canal of the Kern Valley Water Company north of the Head-quarters in 1878, but I was on the lower levee of the canal in 1878, there at Cole's bridge. There was considerable water on the north side of the levee; it was standing considerably higher on the north side of the levee than it was on the south side; I suppose, five or six feet higher. That is caused by its being dammed up by the levee; it was dammed completely across the swamp. Had that levee not been there the water would not have

1219 stood there; if the levee had not been there the water would have gone down into the lakes, of course, until it reached its own level, of course. The water was dammed up completely across; had the dam not been there, there was nothing to prevent the water from going to the lakes; this water was simply held back by the dam. The lakes were not full, but there was considerable water in them; they could have taken, I think, considerably more water. I have seen them a great deal higher than they were then. I was down on the canal of the Kern Valley Water Company in 1880, in May. I don't remember whether there was any

1220 water in the canal or not. I was there later in the year, and there was considerable water in there; the 1st of July, I think it was. The water was running; it was five or six feet deep, running there; had a pretty good current. That canal runs right along the margin of the swamp lands.

Q—Did you see any water in the body of the swamp land?

A—Yes, sir.

Q—At that time?

A—Yes, sir.

Q—Whereabouts?

1221 A—All along. I saw some in the slough, from the waste-gate down, a considerable distance. I don't remember how far. Then below that there was a great deal of water.

Q—Did you see any water outside of the slough in the body of the swamp land at all?

A—North of Weed Island I saw a great deal of water in the swamp lands.

Q—How was the water north of Weed Island?

A—It was all spread out all through the country there I suppose. I could see out as far as the edge of the tules. That was in July, 1880. I don't think I

1222 was there in 1878.

Cross-examination of

W. R. MACMURDO.

I was on the Calloway in 1877. At the end of that year, I think, it was constructed to Section 22, T. 28, R. 26. I suppose it was about 12 or 15 miles from the McCaffrey Slough. I don't know how far. The water was in the canal at the end of that year. At the end

1223 of the year 1876, or the first part of 1877, I think the canal was constructed somewhere on Section 7, T. 29, R. 27. Parties were irrigating from this canal in 1879, on Section 35, T. 28, R. 26. I think about 300 acres was irrigated that year in that section. All of Section 19 was irrigated that year; 2 or 300 acres was irrigated on Section 1, T. 29, R. 26, that year, and about 160 acres in Section 12, same township. About 30 acres in Section 18, T. 29, R. 27. The canal runs through all of those sections. No, it does not run through Section 19. I don't think it runs through Section 35. It does not touch 19.

1224 Q—Then that map I is not correct?

A—That map is correct. I put in a good many side-gates in the year 1879. The first one I put in in 1879 was in Section 27, T. 28, R. 26. I did not put in the side-gate on Section 19. Side ditches were constructed under my supervision; I think 3 or 4 miles of the main side ditches. That was in January, and February, 1879, that I constructed 3 or 4 miles. When I first went there I think there was probably 30 miles of main side ditches constructed. Mr. Fillebrown constructed some of them, and Mr. Taylor constructed some. Mr. Fillebrown has been the engineer
1225 of that company since 1878, I think, continuously, and at various times before he was employed for a length of time. There was some other land that got water from that canal in 1879. I don't know the amount of it. It was given to people living out there, settlers living out beyond Section 19. I cannot say positively the amount that was irrigated. I know that there was other land irrigated.

Q—Was all this occupied by the tenants of Haggin & Carr, that you have called off?

A—All but Section 19. This Poso Creek settle-
1226 ment that I have referred to is composed of ranchers, people and family living there, having ranches there and beyond Section 27.

Q—Are those ranches occupied by tenants of Haggin & Carr?

A—Some of them.

Q—Nearly all, are they not?

A—I don't know exactly how many are and how many are not. A good many of them are tenants of Haggin & Carr, a great many of them.

Q—It is a settlement composed nearly wholly of the tenants of Haggin & Carr, isn't it?

1227 A—Well, there are a great many tenants of Haggin & Carr; I don't know what proportion. I suppose more of them are his tenants than otherwise. There is a man by the name of Martin who is not a tenant; and Cox & Clark had a ranch out there. That ranch is in the Poso settlement. I cannot recollect any one else just now. I could not say how many tenants Haggin & Carr have out there. There are several besides those whose names I have called, but I don't recall their names. I could not say whether there was a dozen, 20 or 30; I don't know of 10. I think there was as much water running in the Kern Island Canal

1228 in 1875 as is running there now. I saw it in 1875 only where it crosses the road, and where it crossed at the mill. It is probable that I saw the canal below the mill in 1875 or 1876. I don't remember distinctly whether I saw it below the mill in 1875 or 1876. I could not say where it ran below the mill. I don't remember much about it below the mill. The Farmers' Ditch was dammed up in the year 1880 on Section 24, T. 29, R. 27.

Q—Whose land is that?

A—I am sure I don't know.

Q—Don't you know who owns the land?

1229 A—No, sir.

Q—Who dammed that up?

A—I superintended the work; had it done.

Q—Who did you do it for? Who were you at work for?

A—I was working with Mr. James. He was working for Haggin & Carr.

Q—Were you not working for Haggin & Carr?

A—I was at work for Mr. James, who was doing the work for Haggin & Carr. I was at work under the supervision of Mr. James, I suppose.

Q—You were not at work for Mr. James?

1230 A—I am not now. I was at that time. Mr. James kept my time, at that time, and turned it in.

Q—It was Haggin and Carr, who paid you for your services, isn't that so?

A—Yes, sir. Dr. Thornton paid me.

Mr. GARBER—We do not make any question about that.

Mr. HOUGHTON—But the witness seems to.

The WITNESS—I think it is twelve or fifteen miles from the head of the Beardsley Canal, to the cañon where the water comes out of the mountains. I cannot remember the exact distance. I have examined

1231 map I, and I find that substantially correct. I made the greater part of it. The part marked there as "Kern River," I did not make. I have examined that part after it was on the map and find it to be correct. Kern River is correct as laid down on that map. The lakes there I did not make.

Q—Do you know anything about the lakes being correctly delineated upon that map?

A—No, I do not. I don't think they are. I don't know whether they are or not. I know a part of the map is correct. I know the northwesterly extremity

1232 of Buena Vista Lake is correct. I think the lakes are correctly delineated on that map.

Q—What other work is there on that map that you didn't do?

A—The slough along there, marked "Buena Vista Slough," I didn't do that.

Q—Do you know whether that is correct or not?

A—Yes, sir. That is correct. I have examined it.

Q—I understand you meandered that slough?

A—Yes, sir.

Q—When did you do that?

A—I did a part of it in 1879, and a part in 1880.

1233 The part I did in 1879, was in May, and a part in July. In May, I did that part lying between that northwest corner of Section 24, T. 30, R. 24. [Pointing it out on the map I.]

Q—And what other point?

A—To the west line of Section 3, in the same township and range. I don't know whether I have the notes of that meander or survey, or not. I last saw them at the Bellevue Ranch, probably a month ago; but I have not seen them for several weeks; probably last about a month ago. The water was standing in holes when I ran that meander line; no water running

1234 there. I did not run levels at the same time. In July, 1879, I ran the line from Buena Vista Lake to that point where I started before. At that time there was not a great deal of water in the slough; it was not running; I think not; I don't remember; I have not the notes of that survey; it is some time since I saw them; I last saw them at Bellevue Ranch; the draughtsman had them there.

Q—When did you meander the balance of that slough from Section 3 north?

A—In 1880; I don't remember whether it was in

1235 April or May; May, I think.

Q—What was the condition of the water of the slough at that time?

A—There was water running through the slough; there was not a great deal; a pretty good head of water going through. I could not just estimate it, because the current is very slow; a very sluggish stream. I crossed it from time to time in 1880. The water was about 2 feet or 2½ feet deep; deeper in some places than in others. There were some places in holes it was pretty deep.

Q—How far did you follow that meandering at that time?

1236 A—To Section 24; probably the north half of the Section 24, T. 29, R. 23. I don't think I have the notes of that survey. I think I saw them about a month ago, at the same time that I saw the others. I had a copy of them. I got them at the ranch, at the office, and left them there, in my room. When work of that kind was done, we used to make a report to Dr. Thornton, and then turn over the notes. That was my instructions, to turn over all of the notes and maps; make a report to him of whatever was done in that way. I think I did it in this case. I don't remember particularly whether I did or not. I think these notes
1237 were turned over to him. I didn't make that portion of the Map I representing Kern and Buena Vista Lakes and the surrounding lands.

Q—What is that body of land in yellow represented between those lakes; do you know?

A—I could not tell you.

Q—What is that?

A—I don't know what the yellow land represents. I know that it is in the swamp land there. I don't know what the yellow represents on map I. I did not plat that strip of land running northwest and
1238 southeast along what is known as Buena Vista Slough.

Q—Did you say whether you put that meander line on there, or not, of that slough?

[Referring to map I.]

A—The meander line of the slough?

Q—Yes, sir.

A—I don't see any meander of the slough there.

Q—The line of Buena Vista Slough?

A—I didn't put that on there. I examined that, and found that to be correct; substantially correct. That map is made upon a scale of $\frac{3}{4}$ of an inch, equal to 80 chains.

1289 Q—What lines are laid down upon that map by actual survey?

A—Well, nearly all of these are laid down by actual survey. That is, the slough there, the river, and those canals.

Q—What slough do you mean?

A—Buena Vista Slough. Most of the canals are laid down from actual survey, and Old River. No canals that I know of that are not laid down by actual survey; I don't know whether Goose Lake is laid down by actual survey; nor do I know whether Tulare Lake is or not. Goose Lake Slough is laid down from a Government

1240 survey; a part of it is laid down from my actual surveys—from the southeast corner of T. 29, R. 26, to the west line of T. 29, R. 24. A part of that is from my survey. I don't know what the green line on the east side of that map represents. The South Fork is correctly laid down on that map, and Old River. The branches of New River are laid down on that map from actual survey. I made some of them. I ran the meander lines down there in 1879, I think it was.

Q—Did you run a meander line on the north, south and middle branches that are represented there?

A—Yes, sir; all of them; and they are platted from
1241 my meanderings and survey. I have not got the notes of that survey. I have not seen them for some time, for several months; I suppose it is 2 or 3 months since I saw them. The last time I saw them at the Bellevue Ranch. Turned them over to Mr. Haggin; that was in April, I think. I had copies of them in making these maps. The river and the slough are made by some one else; and I compared that with a copy of my notes, to see if they were correct.

Q—How did you know that the copy was correct?

A—Because I made it myself. The copy of the
1242 notes that I used I made myself, and it was a correct copy of the original notes that I had made. I made such copy from the original, some time after I had made the survey, but I don't remember the exact time, and that copy I had in April, and compared them with this map. I ran that meander line and located these forks of the river below Tracy's Crossing, in 1879. Mr. Redding, Mr. Dixon, Mr. Mowry and Mr. Sorahan assisted me, and W. L. Dixon and Mr. James assisted at that survey. He assisted in all of the surveys. The work was all going on at one time; he, Mr. James, was doing one part of the work and I was doing another.
1243 I think we commenced in January, 1879, and were working there until September, 1879. Mr. James was working with me. We did not run all of the lines before we left there. I returned afterwards and closed the lines on the 7th Standard. The line that I closed afterwards was the line from Buena Vista Slough; the line from there to the township corner on the southwest corner of T. 30, R. 24, from there to the 7th Standard line due north on the Range line. I think I ran all of the meander lines of the slough and branches of the river before I left there, and I went back there to make some corrections once afterwards. It was a

1244 correction in the angles taken by the instrument. It was only to correct an error that I went there. I ran a meander line down the Middle Fork, and then around up the North Fork, and closed at the forks of the river, where the river forks; then down the South Fork and around the Middle Fork again, closing on that line. Mr. James and I, running this line, took separate notes.

Q—Were you working together or independently?

A—Well, we were working together. We had two sets of notes for the same work.

Q—I understand you to say that you first ran this
1245 Middle Fork down which way, down where it is platted in; will you designate on that map the first meander lines that you ran?

A—I could not tell you, except that we followed the general direction of the river. I could not say any nearer than that. On that scale it would be inpossible.

Q—Show me on this Map I the channel that you first ran?

A—It was down the general direction of the Middle Fork there.

Q—That is down the Middle Fork? In what color
1246 do you call that?

A—I call that sienna.

Q—Then what is the next one you ran?

A—Ran up here; back up the North Fork to this point. That is Gage Slough. Then ran down the South Fork, down that branch of the South Fork, then up this branch of the South Fork to this point.

Q—You ran down the north branch of the south fork?

A—Yes, sir.

Q—You did that all at one time?

1247 A—I didn't do it all at one time; I was a length of time working at it. At that time there was no water running below the forks of the river, as I remember. That was in July, the latter part of July, 1879. A part of the Map I that I made, I made in April of this year. I made Map H. That was in April. I did not make that from notes, but copied it from another map, which was a map just like this. I did not make that other map. I don't know who did.

Q—Do you know anything about the corrections of that other map?

A - Yes, sir.

1248 Q—How do you know that?

A—Because I compared it with the other map.

Q—How do you know about the correctness of the other map, if you didn't make it?

A—Because I surveyed all that country and I know it.

Q—Have you compared that map "H," with your notes, checked it off?

A—No, sir. I have not.

Q—Then you simply know it is correct by looking at it?

A—No, sir. I know it is correct by a copy of my
1249 notes.

Q—Have you checked that off by your notes?

A—A portion of it I have checked off.

Q—What portion?

A—Buena Vista slough there, and the balance I have not checked off. I know it to be correct from my knowledge of the country. That canal laid down on Map H and I, is substantially correct, and from actual survey. The scale of Map H, is 40 chains to the inch. I copied it from another map. The levee of the Kern Valley Water Company, runs along the south line of Section 18, T. 30 South, Range 25
1250 East, and along the south line of Section 13, T. 30, range 24 east. On the south line of Section 13 the section line runs along the levee. On the south line of Section 13, it runs 60 chains, and near the southwest corner of the southwest quarter of 13 in T. 30, R. 24. I suppose all of that levee was built by the Kern Valley Water Company. That is my information. But I don't know when it was built by them. They had charge of it. I had seen them in charge of it always. I did not see them when they were constructing it at all. I didn't see them construct-
1251 ing the canal. I saw them at work at the head-gate, and near Head-quarter camp. Never saw them at work on the mile of levee that is south of the line of Section 18.

Q—There appears to be in Buena Vista Slough, certain breaks; what is the meaning of that on map H, Section 32.

A—It means where the channel is hard to determine, where the channel is. There are ponds all out there. Those ponds are represented on this map as well as they can be.

Q—Is there any connection between those ponds, at all?

1252 A—None that I know of, but the water; they are connected by the water when the water is there, but it is spread out and the banks are hard to determine, I don't mean to say they are not connected at all, by simply leaving these breaks in there.

Q—Then that map is incorrect, as far as that water course is concerned?

A—So far as that part of it is concerned, that map is correct.

Q—There is no connection between those ponds?

A—This shows the connection.

Q—If it don't appear there, how is the map correct?

1253 A—The map is correct, because the water is shallower between those places than it is there [pointing].

Q—Then, in running a slough or water course, do you make a break in it when you come to shallow water?

A—When the bank is not defined.

Q—Although the stream continues a few yards beyond?

A—Yes, sir.

Q—If it ran over a piece of flat land for ten yards, you would make a break in it?

1254 A—If it ran over a piece of flat land and has no banks, I don't make any banks there. I would not mark a water course where there is no bank and the water is spread out.

Q—Was there any water running there at the time you made that?

A—The water was standing there; I don't remember that there was running water there at that time.

Q—Will you describe the condition of that slough, or whatever you have a mind to call it, at that point, and between those places on Section 32, on Map H?

1255 A—The slough at that point is right at the base of the hills that came in from the Coast Range on the west of that country, and the water comes down there and stands in ponds all through that country; and at that time it was all grown up with tules, and there were deep holes in it in places. Some of these holes were only a few yards and some were a hundred yards apart. I don't know how many; they are not all marked. There are several ponds there that are not put down on that map.

Q—What was there between those holes?

A—There were tule roots and one thing and another; the country was all grown up with tules.

1256 Q—Was there any place where, when the holes were filled, the water would run from one to another?

A—Yes, sir.

Q—What was the condition of the bank of that slough along by those hills that you speak of?

A—The bank was about 150 feet high, I should think, on the west side; on the east side it was, as I have marked it on the map, hard to find any bank at all. I should say it was a quarter of a mile before I would find anything to prevent the water from going towards the east. The water would spread over the country for a quarter or half a mile, and then if there was enough water that
1257 way in the slough it would run if left to itself, the most of it down Buena Vista Slough.

Q—Do you mean to say that if you should turn water into that slough from Buena Vista Lake that before it would pass on from one lake to another, that it would spread all over the country half a mile wide?

A—Well, some water would run through before it spread that much. But if you turned enough in to fill the slough, it would spread that much; that is, enough to fill the slough up to the bank as it is marked on that map; that is, if you should turn water enough
1258 in to fill up the slough bank full, at a point south of these lakes, it would then spread out half a mile. Those banks are of different heights; some places 2 feet deep, and in some places 5 or 6, above the bottom. I mean to say that if you should put 3 or 4 feet of water into that slough, it would spread out at that point over half a mile. I never have run levels below Head-quarters along the Buena Vista Slough. I don't remember of ever running levels at all down there, except those I testified to yesterday. I have not run levels right through that body of swamp land from one end to the other; nor have I at any point below Wible's; nor have
1259 I run levels along Wible's Canal, only as far as the head-gate.

J. C. Keyes,

re-called for the defendants.

Mr. Haggin. Q—Have you these weather reports?

A—Yes, sir.

Q—Did you make a comparison of the copy with the original?

A—Yes, sir; examined it myself; it is a correct

1260 copy of the original in all respects. The figures in red represent the observations taken by Mr. Sampson, and those in black, the observations taken by myself. I have, myself, compared the original with the copy; I know the original to be correct, and the observations taken by myself were put down when it was fresh in my mind.

Q—When did you take these observations put down in this book?

A—They were taken at the times denoted at the heads of the columns, at 7 A.M., 2 P.M., and 9 P.M. They would always be taken very near those hours—
1261 within 15 minutes, or perhaps a half an hour of the time. If I was away at any time at those hours, Mr. Sampson would take the reading. When I was there they would always be taken within half an hour of the time they are noted. I made those entries right after looking at the thermometer; they may have been taken sometimes half an hour earlier or later; I don't think over thirty-one minutes variation. Nobody but Mr. Sampson and myself made the record.

J. A. SAMPSON,

1262 re-called for defendants, testified:

Mr. HAGGIN. Q—This is the book of records which you kept?

A—Yes, sir; that is the original book which I testified in relation to a few days ago—the record for January and February, 1879. Mr. Keyes and myself took them; no one else took any of them. Those which I took are correct. I made the entries at the time; not always at the exact time, but a few minutes afterwards, while they were fresh in my memory. I have made a
1263 copy of that book; this is the copy. It is a correct copy.

CROSS-EXAMINATION.

Mr. HOUGHTON. Q—How near the hour designated at the head of the column would you make these observations?

A—Within a few minutes, always.

Q—Half an hour?

A—May be half an hour, may be a few minutes longer; but whenever I took it I always kept it in my

1264 memory. The observation marked at 7 o'clock I always took within half an hour of 7 o'clock, or within a short time of 7 o'clock; it could not have been an hour after 7. That is true also of the 2 o'clock observations; the same way as to the 9 o'clock. I was always there at the office, as a general thing; I don't think there were any exceptions.

Q—Don't you think there was any time more than half an hour before or after the time you should have taken the observations?

A—There may have been a few minutes over half an hour, but not an hour; there may have been between
1265 half an hour and an hour. I might have been in Bakersfield a few hours during the day, but I was on duty all of the time.

Q—Were you not away at 7 A. M., or 9 or 2 P. M., at all, during that month?

A—No, sir; not at all. I was always there at those three hours. That is also true as to September. I was not away at those hours. That is also true of October. In November I was away a week. It was the middle, I think. I left Sumner on about the 14th. I did not keep the record myself. I put the figures
1266 down, and Mr. Barker took the figuures on a separate piece of paper. I put them there myself. I did not take the observations during that week in November. But I kept the record in this book. That is the only time. I have always done it, since and previous to that time. There was a week in November that I did not take the readings.

Q—What do you mean by saying that all of this in red, in this book, were taken by you?

A—I told you that I was away a week in November. I did not mean that I took them all. All in the red are mine, except that week in November. I was not
1267 away in December, nor was I away in 1880; nor was I away at any time between July, 1880, and April, 1881, either at 7 A. M., or 2 P. M., or 9 P. M. I don't think I was. I was in Bakersfield but one evening during that time. I never was away except that week in November. There was a week in November that somebody else kept this record, and I have included that in this list of this in red. Mr. Barker, who kept that for the week in November, is in Lathrop. He was the day operator at the time. I left Sumner on the 14th of November, and returned on the 20th. I took the observations that morning of the 14th, and Mr. Barker took

1268 them afterwards. I took them all on the 21st. I have examined this copy and compared it with the original.

Mr. HAGGIN—We offer all of this record; this copy, except that after the 7 o'clock record on the 14th of November, up to and including all of the 21st of November, 1880.

Mr. HOUGHTON—We object to it as irrelevant and immaterial.

Objection overruled. Plaintiffs except.

[Copy of the record read in evidence and marked Defendants' "Exhibit O."]

1269 [Here insert.]

Cross-examination of

W. R. MACMURDO.

(Resumed.)

I have been down on Buena Vista Slough before the Wible levee was thrown across at Head quarters near that point. But I never ran a survey or meander along that slough before that. I never made any sur-
1270 veys of it before that. I never surveyed it I know that it ran like it is laid down on this map I, because that is the proper way for it to be there. I mean map "I." I don't know whether it ran in two branches at that point or one. I was down on Buena Vista Slough with Mr. Crusoe near head-quarters, in May of this year, on the 14th and 15th, I think it was. We then went first to the DeWebber place, and from there to Bonestell's. We did not go there direct from one point to the other. We went directly to the slough, and from there to Bonestell's. We reached the slough
1271 some distance south of Bonestell's; probably a mile. We did not cross it where we first reached the slough. One reason was that we did not know whether we could cross, on account of the bogs there, and another was that we wanted to go to the Bonestell house. We did not measure the depth of the water at the point where we first reached the slough. We had measured it before that, at the same point, in 1880. I don't remember exactly how deep it was then. It was about one and a half or two feet; the bank at the point where we reached it was 3 or 4 feet high, and there was more water in it than there was in 1880.

1272 We turned from there and went to the Bonestell house. We followed the road from the De Webber house to within 300 or 400 yards of the slough. Could not follow it any further. At this point I had measured the water before on the road. From there we followed right on the slough, as near as we could get to it, and went around by Bonestell's. Crossed near Bonestell's. Drove right through the slough where the horses had been crossing. We saw tracks across.

Q—How deep was the water where you drove across there?

A—It was 2 feet deep. It came up to the hubs of
1273 the buggy. As I recollect it, that was all. I don't think it came any higher than that. It did not come inside of the buggy. Mr. Crusoe was with me in the buggy. We then went north from Bonestell's house a short distance, probably a quarter of a mile, a little west of north. It was in a northerly direction. I cannot say whether it was northeasterly or northwesterly. It may have been one degree east or west of north. I don't know whether it was east or west of north. We found water after going a short distance. Came across some checks, and we supposed it was for the purpose
1274 of irrigating. We crossed then. I don't remember how far we went after crossing them. Went about a quarter of a mile from the Bonestell house, as near as I could get at it. We then went back towards the pump on the west side of Weed Island. We went in as near a straight line as the nature of the ground would permit; doing so we were going in a southwesterly direction. The exact course I cannot state. When we passed a point west of the house we were only a short distance from it. We left the house to our left, going back towards the pumps. I was down there again with Mr. Crusoe the following
1275 day. We went down where the levee crossed the slough near the Head-quarters camp.

Q—Did you go down into the line of the slough?

A—Yes, sir; on the east side. We followed along on the east side until we reached the Head-quarter place—that is, the Norton place—and we crossed there and went across on a wire stretched across the slough.

Q—How deep was the water at that point?

A—The water was—I don't remember exactly. They measured it. I did not measure it myself and don't remember. It was about five or six feet deep.

Q—How wide was it at that point?

1276 A—I did not measure it; probably 50 feet.

Q - How wide was that slough where you crossed it at Bonestell's?

A—I cannot say; probably not over 30 or 40 feet; may be wider at that point. In that place it is, where they had been crossing, and the water had hollowed out the banks some little distance. I don't think it was over 40 feet. From Norton's we went down the field a short distance until we struck the levee—Crocker's field. It was a hay field. It seemed to have been cut for hay, alfalfa and grain. The greater part of it had been cut. Then we kept north until we struck the
1277 edge of the slough; probably went half a mile before striking the slough. We then came back along the slough on the levee; came up keeping on top of the levee to a barn. After reaching a barn we went back down the levee again, following the levee about one mile or a little more to the end of it. We then went north and kept along the bank of the slough until we got to where the slough made a bend towards the south again. When we came to the end of the levee we found a sheet of water spread out through there. The water was running some in a southwesterly direction. We crossed the water at that point. The first running
1278 water we crossed was about six feet wide; about between five or six feet wide. Then we reached more water. It seemed to me about a mile after we crossed the running water before we reached high land again.

Q—After crossing that 6 feet of water, you went nearly a mile before reaching high land again?

A—Yes, sir; I don't think we reached any high land until we got to Weed Island. After crossing that 6 feet of running water, we were going through water the most of the time for a mile. We ran through running water after crossing this six feet almost the whole distance; nearly the whole distance the water was run-
1279 ning.

Q—After crossing that 6 feet of water, did you not go immediately upon high land again?

A—No, sir; we continued right on in the water all of the time. When I was down there with Mr. Crusoe we were on the west side, and crossed to the east; crossed it on Sec. 32, near the Willows. The water at that point was out around the Willows some distance, shallow water. It is hard to tell how wide the slough was at that point where I crossed. The running water in the slough there was probably 60 feet wide; it was waist deep.

1280 Q—Wasn't it more than waist deep?

A—I don't think it was; it may not have been so deep. The mud was in the bottom about 1½ feet deep; and that made the water come over my waist; but the mud was a foot and a half deep. We waded across, and the water came just over our waist. It did not come up to our arms; between the waist and arms. I have the notes taken by me in running the levels across the swamp land; and also Mr. Fillebrown's notes. I could not get the notes that I made. I have got the notes that Mr. Fillebrown made. Here are the notes that Mr. Fillebrown kept. I kept a check on these
1281 notes. I have not got the notes that I kept myself on the first and second day, running those levels?

Q—You said last night that they were at the ranch?

A—I suppose they are there now.

Q—I asked you to produce them?

A—I thought you had reference to these notes here. I don't know whether I can produce them; I suppose I can.

Mr. HOUGHTON—It is our desire to have those notes.

The WITNESS—I have Mr. Fillebrown's notes. The notes that I kept were the elevations of every point
1282 where we moved the instrument I moved the instrument 5 or 6 stations: that is, moved it about ten stations altogether. Didn't move it any certain number of hundred feet; would move it as far as we could. We tried to move it so as to have the same sights back and front at every turning point. In making these notes we made notes of any feature between the 100-foot stations worthy of notice. The elevation of every turning point is on that profile. At every turning point I have the height of the instrument in my notes. If at a turning point half way between the stations, if anything was a half a
1283 foot higher, it was noted on that profile. In doing that work I carried the rod and sang out the reading of the rod. I joined Mr. Fillebrown every time we changed the instrument, about every 1,000 feet.

Q—Was it at that time you looked at his record?

A—Yes, sir; pretty much every time, as I recollect. I examined the book very nearly every time, I think, that we passed, to compare and see that we were right, every time; I don't remember that I did every time.

Q—Could you remember the elevation for 10 stations and say whether they were correctly put on that book?

1284 A—No, sir; we made this comparison every time we passed each other, which would be about every 1,000 feet.

Q—Could you remember every elevation you had given him from the time he had passed you before?

A—No, sir; I could not say that he had every one of them down right. Of course I could not know that he did set them down correctly; but what he did set down correctly, and what I do remember, I know were right, and I had reason to believe that the others were correct.

Q—Do you know of your own knowledge that they
1285 are correct?

A—No, sir; these intermediate points, I don't know whether they are correct of my own knowledge.

Q—How did you measure the distance in going across there to get your 100 feet stations?

A—We measured by pacing or stepping. We stepped the whole distance across there, 4 miles.

Q—And that in the whole distance you were only 20 paces out of the way?

A—For the whole 4 miles we were only 20 paces out of the way according to the wagon wheel measurement.

Q—Can you step off a mile without being 5 paces
1286 out of the way?

A—I think so, on level ground; on such a country as that.

Q—Through the tules?

A—Where they are broken down as they were there. I think I can.

Q—And not vary five paces in a mile?

A—I might vary more than five paces, but where I had something to check with all of the time I think I could do it within five paces. Very little of that country was rooted up by hogs where we passed. Some places that we crossed were badly rooted up;
1287 but only a short distance.

Q—Still with all these irregularities you could pace that off within five paces?

A—Yes, sir. So it came out.

Q—How often did you check?

A—I don't know exactly how often, but we did it quite often. I cannot say how many times going across that 4 miles. We did it frequently when the wagon was passing. Whenever we could get a convenient distance Mr. Fillebrown would generally ask the number of revolutions, and I would ask him the num-

1288 ber of stations, and he told us how they were checking the distances off.

Q—You say that the wagon would go ahead and then stop, and you would come up with it; how far did it go the first time before you joined it at all, after it started?

A—I don't think it went more than a quarter of a mile; probably the same distance the second time. I don't think it went quite so far the next time. I think sometimes it went more than a quarter of a mile before we joined it. Probably the longest distance we went before we would check with it would be half a mile.

1289 The revolution of the wheel to the mile is 396. I don't remember the exact size of the wheel. We had measured it, and made a calculation, and knew that 396 revolutions made a mile.

Q—Before stopping on Section 12, if it went four miles it made a little over 1600 revolutions?

A—I don't remember now. If it was four miles it would have to make 1584 revolutions. The number of revolutions made at that point was reported to Mr. Fillebrown, and he put it down in his book.

Q—Is it down in that book?

A—I don't know.

1290 Q—I wish you would look and see.

A—[After examining the book] I have put in here, "Station 211, to 1600 revolutions, equal to four miles, to the centre of Section 12."

Q—Section 211, is that equal to four miles?

A—Yes, sir; equal to 1600 revolutions. Making that survey we crossed from the left or east margin of the slough. We fixed the point relative to the east corner of Mr. Harold's house; that point was noted in the book that I kept, the other book; I have not got it here. I took the bearings from the house to a point,

1291 and the distance, I found it was about 200 yards. I don't remember the course; I don't remember now. We struck the pond in going across there; we first struck the pond at Station 124; had traveled then 12,400 feet, according to my measurement.

Q—Where did that station 124 come, relative to that pond?

A—It came 32 feet east of the pond—east of the water line. We then went around that pond, and not across it; did not cross it at all, and the distance around that pond is represented by 31 stations.

Q—Do you know the course that you took in going to these different stations?

1292 A—No, sir. There was no record kept of the course we took in making these stations. I didn't keep any record of it. We did not set our instrument and go in a fixed and definite course in going round.

Q—How do you know if you didn't go across the slough at all where to fix your 125th station?

A—The water at that point was very narrow. We estimated that to be 25 or 30 feet, and commenced on the edge of the water and stepped off the balance of the station. The width of the water was an estimate. We did not cross the water at all or step it. During that whole trip from the east side to the west side we
1293 found no depression or elevation that we considered sufficiently material to make any note of, except the pond that we crossed running this line across this swamp; the first pond that we reached we were running through there to get levels of that country. If I was running such a line to find out whether water would run or not I would run around and see where the lowest ground was in the neighborhood. The water will follow the lowest current. I should consider any depression at all that was noticeable at all of sufficient importance to note.

1294 Q—Then if there had been a depression of a foot you would have noticed it in going across there?

A—Yes, sir. In going across there we found no depression between any stations a foot in depth. In going across there, except the distance around the pond, we ran on a straight line these 1600 revolutions, and from that we made a deflection. We ran around no pond except the one I have spoken of. The difference in the length of the profile represented upon Exhibits "L" and "N" of this line is the distance around the pond, 31 stations. There is a difference of 31 stations in those two profiles.

1295 Q—Does each one of those stations represent 100 feet?

A—Yes, sir; and there is a difference in the length of those two lines of 3100 feet. I found no depression or place where the water would run into this pond or channel to the south of it. Had I found it I should have noted it on this plat.

Q—Did you find any depression or lower land in going around that pond, than you found on the edges of the pond?

A—No, sir.

Q—Not at all?

1296 A—No, sir. If there was any, it was so slight that I did not notice it in going around. There is no note made on this note book in connection with Station 114, nor is there any connection with Station 113. The elevation of 113 is 93.08. No note at all.

Q—Will you turn to Station 124, and see what that reads?

A—That is 91.9. There is a note in connection with that. It is: "On the east bank, long stagnant slough, about 4 feet"

Q—Then what comes?

A—"Station 1. Points running south, around south
1297 end of slough."

Q—Read all that follows there.

A—"Station 1:

92.9	92.9	93.3	92.9	92.9
92.5		93.7	92.9	92.9
92.9		92.3	92.5	92.3."

After 92.5 there is a note: "At southeast extremity of slough or pond, 15 chains." After that comes 92.3, "along southend of pond;" then: "92.8 92.4
92.3 92.2 92.8 92.9
93.1, "at the southwest extremity of pond."
1298 92.8 92.9 92.5 93.2
92.4 93.2 93.9.

Then Station 125 is the next elevation, and that is 94.3.

Q—What does the note there say?

A—"Point on the west bank of pond an original line." So we got back to the original line.

[The witness is asked to mark on the plat where Station 124 comes, and does so.]

At Station 125 the elevation is 94.3. In going around the pond, the lowest elevation we would reach below 125, which was 94.3, was 2.1 feet lower.

1299 In going around that lake or pond, we found one place where it was 2.1 feet lower than it was on the west bank. That was between the southeast and southwest extremity of the slough or pond.

Q—Then, passing from the eastern extremity to the southeast extremity, how low a depression did you find? In passing from Station 124 to the southeast extremity of the slough or pond, how much of depression did you find below 94.3?

A—2.4 feet.

Q—Then, passing from the western extremity——

A. [Interrupting]—I will state that that point, 2.4, is

1300 Station 124. Then passing on to the western extremity of the pond, we found a depression 2.1 lower than Station 125.

Q—Then, in going around to the south, keeping on the margin of this lake, you found 3 different points: one where it was 2.1 below the west margin, or two of them where it was 2.1 below the west margin, and the other place where it was 2.4 below the west margin?

A—2.4 lower than the west margin at Station 124. On the east margin of this pond it was 2.4 feet lower than the station on the west margin of this pond. The other two stations that are noted there as being 2.1
1301 lower—in fact, all of the stations around the pond, without exception, are taken on lower ground than the actual bank of the pond, for this reason: the instrument stood upon the west side of the pond, and we could see the whole bank, and in going around I had to keep out of the tules, so as to keep in sight of the instrument. By going into the tules on the edge of the pond we would have been on higher ground the whole distance. In going around that course we were running inside of the tules, and within 10 feet of the drag line probably. I don't think it was more than
1302 10 feet off at any point from the drag line. In going around that lake we went about 15 chains, or nearly a thousand feet, south from a straight line across the slough. I don't know just how far we went south to get around the lake, only by the measurements we took. We took no actual measurements in going around there except by stepping, and by the wagon wheel. Mr. Jackson drove the wagon around, drove around and took the measurements of it. I don't know whether we went in the tracks of the wagon wheel exactly in going around or not. We followed around on the inside of the tules, so that we could see the rod, and every sight we took was lower than the actual bank of the pond.

1303 Q—You don't know how much lower?

A—No, sir.

Q—Did you take any measurement to see how much of an elevation there was back of where you came, or further south?

A—Yes, sir.

Q—How much was there?

A—I don't remember the difference. There was considerable difference, over a foot in one place. I remember, but I don't remember whether it was put down in the notes or not.

1304 Q—Not of sufficient importance to note?

A—I don't know whether Mr. Fillebrown noted it or not. I suppose he did note it, if he did not he considered it of not importance enough to take the elevation.

Q—Did you ever run a level before where, when you came to a natural channel of that kind, that you went around it, and not across it?

A—Yes, sir.

Q—For what purpose?

A—For running a ditch.

Q—Then you were going to build a ditch around it, were you not?

1305 A—Yes, sir.

Q—But I mean, if you wanted to find out the level of a country, did you ever run a level before where you run around anything, if you wanted to get a profile or vertical section; did you ever hear of a level being run around a natural obstruction?

A—Yes, sir.

Q—When you run across the country between 2 given points, is it customary for surveyors to run around obstructions?

A—Yes, sir. Frequently we run around obstruc-
1306 tions when we want to get the line of the country through there. It depends upon what the purpose is.

Q—If you were going to run through a country between two given points to get the levels of that country, is it the custom for surveyors to run around an obstruction? Would it be customary if a man was looking for a slough or channel?

A—If he was looking for a slough or channel he might run into all of the small places that he could find.

Q—If he was not trying to find it, he would go around it?

1307 A—If he was looking for the highest ground he would go around it, certainly.

[The witness is asked to give the elevation of Station 10 from his notes.]

The Witness—98.64. Station 11 is 99.30.

Q—Will you look at this profile, Exhibit L, at those two stations, and see if there is a correct delineation of those two stations on this profile?

A—No, sir; they are not. Station 114 is about correct.

1308 Q—Will you look at Stations 102, 103 and 104?
A—94 45; that is correct, (examines profile).
Q—And the next one?
A—93.40; that is not correct.
Q—It is nearly a foot out of the way, isn't it?
A—No, sir, not a foot.
Q—How much within a foot? How near to a foot?
A—That is about 94.2; it would be three-tenths difference.
Q—There is that error in this profile, isn't there?
A—Yes, sir.
Q—Turn to the next one, Station 104?
1309 A—94.25.
Q—Is that correct on there? That is still lower? Are either of those last two stations correct on Exhibit "L?"
A—No, sir; the two last ones are not correct.
Q—Now Station 130. What is the elevation of 130?
A—93.9 and 131 is 93.99; where it comes to ninety-nine one-hundredths we call it 94. 130 is 93.9.
Q—There is only one-hundredth difference then between 130 and 131?
A—There is five one-hundredth difference.
Q—One is 93.99 and the other is 94?
1310 A—One is 94 and the other is 93.99.
Q—That is one-tenth?
A—One tenth.
Q—Will you look at this profile, Exhibit "L," and see if that is correctly delineated on there? There is 130 and there is 131, (showing)?
A—No, sir; that is not 131.
Q—What is it?
A—That is around the pond; that is correct.
Q—That is correct?
A—Yes, sir.
1311 Q—The error that I called your attention to is owing to the fact that these intermediate stations are put in there?
A—Yes, sir.
Q—How many stations did you make, in going across there, in all?
A—There are 220 odd stations in a straight line, and these 31 stations are around the pond.
Q—How many stations in all, noted in that book?
A—We have noted in the book 211 stations in a straight line.
Q—Is that what that book calls for? 211 stations?

1312 A—Yes, sir. No, that is not all that it calls for.
Q—What does it call for?
A—Two hundred and twenty-two stations.
Q—Is that independent of the thirty-one, or in addition to the thirty-one?
A—That is independent of the profile around the pond.
Q—There are 211 stations?
A—Two hundred and twenty-two stations.
Q—What are the eleven stations at the bottom?
A—The eleven stations at the bottom are the distance between the Station 211 and the levee at the center of
1313 Section 12. We ran 211 one hundred foot stations; that is what I put down here; I don't know whether we ran any more or not; there are that many put down there; I don't know whether there are any more or not. That brought us to the point where the buggy had run 1,600 revolutions; where we started to go to the middle of Section 12.
Q—Two hundred and eleven stations made four miles?
A—No, sir; I didn't say so.
Q—You said you ran four miles there. Will you read off from that book the memoranda which you have
1314 there, passing the end of the fourth mile? It gives course and distance from the center of Section 12?
A—The note is: "Post at center of Section 12, T. 29, R. 22 bears S. seventy-four degrees W., eighty revolutions =sixteen chains." Mr. Fillebrown has made a note of "island" twice; that means high knolls in the swamp; they were considerably above the general level of the country; I think some of them would be about two feet, probably more; the elevations are given in the note; the first one is 92.71; the next one before that is 90.79; the next one to it is 91.64; those are Stations 207, 208 and 209; they are on Profile L. You can find them by
1315 counting back from the western extremity of the pond; you will have to take into account that part of the pond on the bank. The other island is marked Station 200; the elevation is 90.82; the elevation of the next station behind that is 91.12, which is rather a depression than an island it seems so here; there is no note showing the height of that island at that point.
Q—Then the profile Exhibit L is not correct, which shows a depression at that point rather than an elevation. There is no island there shown on the profile.
A—That is correct by these notes; there seems to be

1316 an island by the note made there. The next crossing we made was, starting from the southeast corner of Section 28, T. 29, R. 23. Going across there we took a course south 16 degrees west; fixed it by a compass; on the other side we took some points on the mountains, and we started in the direction of those points; I don't remember what distance we kept upon that course before we turned off; it was very near the slough, though; probably a mile and a half. During that whole distance we were going on a line S. 16 degrees W. I don't know at what station we made that deflection; I think it was at Station 92; it so appears on the notes;
1317 we made an angle to the right; it does not appear on the notes what angle; there is no note as to the distance we went to the right. There is a note here to show that we turned to the left again; there is nothing here to show how far we deflected to the right, and I don't know how far we did. There is not sufficient data here from which any other surveyor would be able to reproduce this line; Mr. Fillebrown could tell it approximately, and I could. We kept the regular stations on this deflection, but there is nothing to show the courses between those stations; I know we only went a short distance from the line, and then started to go back to-
1318 wards it, keeping the points on the mountains in view; it was only a short distance; we could tell when we got back on the line by the points on the mountains; we had two points all the way; we had two fixed points on the mountains, and we could easily tell when we got back one point back of the other; I don't say that we came back to the true line; we came back on what we thought was the true line, and continued on in the same course. Deflected to the right about 200 yards; don't remember how many stations before we got back to the true line again; 5 or 6, I suppose.

1319 Q—At what station did you reach Buena Vista Slough —at what number?

Mr. HAGGIN—He has not said that he reached Buena Vista Slough.

Mr. HOUGHTON—Mr. Fillebrown so testified, and here it is: "In Buena Vista Slough, Station 103."

Q—Then, how far had you gone before you reached the slough?

A—We had gone about ten or eleven stations; we had gone 103 stations—10,300 feet. We continued on then to Station 114; we measured up to the point where we started through the water; then we measured

1320 from the bank of the Kern Valley Water Company's Canal. In making the 114 stations we stepped them off.

Q—How far did the team go with you?

A—I don't remember the station now where it did go; before we got to the slough it turned back; we continued on through to the water in the same general direction. The object was not always in view. We came out, I think it was, near the west line of Section 9; I say it was along the west line of Section 9; I don't know that it was. We came out near that fence; I don't say that it was along the west line of Section 9. After
1321 striking the fence we went to the canal; I don't know in what direction; I followed the general course; we did not follow along the fence. We went down towards the levee first, and then came back to where the fence intersected the line of the water on the west side of those tules; then followed the fence to the levee. It is stated in here that we followed the fence along Section 9 seventeen full stations and a fractional station. We went 114 stations on the east side of the water, and seventeen stations on the west side, which would make 131 in all, or 13,100 feet. Had we kept on the course we started, south sixteen degrees west, I cannot tell
1322 whether we would have struck the Kern Valley Water Company's Canal, without making the calculation. Map I does not show the canal as far as where we struck it. I could not tell at what point, had we kept on the course on which we started, south sixteen degress west—I cannot tell where we would have struck Section 9, without making a calculation—without calculating the latitude and the departure. If we had kept on that course, I cannot say we would have struck the west line at all; that is, if the sections are run correctly; probably we would not; but a great many of the section lines in there are more
1323 than eighty chains; I don't know how much more than eighty chains; there is some considerable variation; I think there is as much as ten chains in some sections in that district. I didn't say that we struck the west line of Section 9; we ran through until we struck the canal bank.

Q—And you ran on the west line of Section 9?

A—I didn't say so. I said we followed this fence; I don't know exactly how many stations we ran on the course we started; the first note of any deflection is ninety-two stations. Then we came back to nearly the same line and went on to the 114th station in about the

1324 same course. I cannot tell you where that would have brought us; it brought us across to the west side of the slough. I cannot tell much about it on the map; it would be some distance from the slough; about there (pointing on the map). I think that map is made on three-quarters of an inch to eighty chains.

Q—Will you tell me how far you would come on that, by that scale?

A—We made some deflection, but I could not tell you on that how far we did come, making a deflection in there.

Q—Get the 114 stations and say about where that
1325 would come?

A—You could not get anywhere near it if you did that.

Q—Please give it to me on the map as near as you can?

A—I don't think this scale here is on that scale at all (referring to small numbered rule).

Q—Then, if that is so, I will ask you to put it on this Map B, as this measure has that scale on it. Platting from the southeast corner of Section 28, going south sixteen degrees west, 11,400 feet?

The WITNESS—(After marking on Map B.) That is
1326 as near as I can come to it.

Q—Will you tell me what course you would have to take in going from where you have marked—where station 114 would bring you—to reach a point on Section 9 seventeen chains north from the canal?

A—I could not tell you, to save my life.

Q—If this map is correct, what course would you have to take? You have made this measurement. Can you tell the course between that point and the one you have marked on Map B?

A—That map is given there on a scale that I don't know anything about; 40 chains to the inch; it may be
1327 more or less than that. It would be about southwest; we would have to run south fifty degrees west, forty-one chains, to go from one point to the other.

Q—I will ask you to make one more measurement on the map: had you continued in the course in which you started, S. 16 deg. W., how far would you have had to go in that course before you struck the canal, assuming this Map "B" to be correct?

A—(After making measurement.) 2.8 miles. It is possible for there to be such errors in Government surveys there that this line extended would have struck

1328 the west line of Section 9; I have known greater errors than that to have been made in Government surveys; I have known such errors to have been made, and I have met with them in this county of greater distortions than that in section lines. I connected my meander lines down there with the section lines, and found them as a rule to be pretty near correct. I have found considerable errors in some of them. Some of my meander lines I connected with section corners in T. 30, R. 24, and T. 29, S., R. 24.

Q—Did you find any very grave errors in these surveys?

1329 A—Some of these section corners I found to be correct, and others I found to be incorrect, but I don't know how much they were; some of them probably one chain. We found some startling errors in that locality in the Government surveying, but I don't remember about those two townships. In the townships below I have found errors, too.

Q—Speaking of this weir that is put in at Cole's Bridge upon an incline which extends south, isn't there a gate in there that is upright?

A—I have never seen it.

Q—Don't you know that there is?

1330 A—No, sir.

Q—Don't you know that the gate or weir that is put in there is an upright gate or weir, so as to draw and turn the water either way?

A—No, sir.

Q—And that those boards are merely temporary?

A—No, sir; I never saw those at all; I have been down under the gate and never saw any such rafters. These profiles are on a scale of 20 to 1; the vertical scale is 20 feet to the inch, and the horizontal scale 400 feet to the inch. Each of these stations on Exhibit L represent 100 feet, and in the lines running the other

1331 way each scale represents five feet; the fine lines running vertically represent 100 feet; the fine lines running horizontally represent one foot; the coarser vertical lines represent 1000 feet; that is so in all this work, on the three pieces of paper, L, M, and N. I think the scale on the profile in red is the same as the others. I assisted in making it. All of these profiles and all of the work on Exhibits L, M, and N, all of the vertical lines represent 100 feet. I know nothing about the correctness of the high water mark as delineated on Map I, but I established it at some points; I know that

1332 a part of it is correct; I ran a part of the high water line which is shown on Map H, but not all. I don't know whether it is correct as a whole or not.

[The witness is requested to bring with him the field notes of his two last level lines across swamp lands, also field notes used in connection with making the Map I.]

WEDNESDAY, May 25.

1333 Cross-Examination of

WILLIAM R. MACMURDO Resumed.

Q—Have you the notes with you that you made of these levels?

A—Yes, sir.

[Produces them; also produces the note-book of Mr. Fillebrown.]

Q—I find in Mr. Fillebrown's note-book, at Station 75, in the margin—what is that?

A—Bull Island 150 feet to the left.

1334 Q—What appears opposite Station 98?

A—"Station 98; 877 revolutions on the slough; about 1.5 deep; runs out in 2 or 300." That is the 98th Station.

Q—What is there on Exhibit L to correspond with that depression 1.5, called for on the notes?

A—Elevation of the land at that station is 94.71, and on the map is 94.71; The next station is 94.42; it appears on the profile about 94.42.

Q—Is there anything between those stations to show that depression which is noted there on the margin?

A—That depression is not at Station 98.

1335 Q—Is there anything between Stations 97 and 99 on this profile to show that depression?

A—There is no note at all between these two stations; the note of the depression is not between those two stations.

Q—Where is that depression?

A—The note of the depression is at Station 98; that may have been on the side of the line. There is no note there to show that the depression was on the line that we ran on.

Q—There was nothing on the map to show the de-

1336 pression of 1.5 at that point, is there, where it is called for.

A—That note there of a depression does not say that it is on the line. If there was a depression on either side, immediately on either side of the line, we made a note of it.

Q—Is there anything on this profile between Stations 97 and 99 that shows a depression of 1.5?

A—There is no note there of any depression there between those two stations whatever.

Q—Is there anything on that map, Exhibit L, between Stations 97 and 99 that shows a depression of 1.5? I
1337 refer to the map now, regardless of the book.

A—The elevations shown on the map here at Stations 97, is between 94. and 95.0, and at 99 it is between 94.0 and 95.0, Station 98; intermediate between the two points shows the same thing—an elevation between 94 and 95 feet.

Mr. HOUGHTON—I wish you would read that again. once more; it is plain enough; I would like an answer to it.

[The Reporter reads the last question.]

A—No, sir.

Q—How far from the starting point would 877 revo-
1338 lutions of the wheel take you?

A—I would have to make a calculation to tell that. The size of the wheel, as well as I can remember, was something over 13 feet, between 13 and 14. It is some time since I measured it; I have been in the habit of measuring distances with that wheel for some time; it took 396 revolutions of the wheel to make a mile, as I remember it, and 400 revolutions would compensate for any unevenness in the ground. As a general thing, that is as close as we could chain it with the chain, by measuring ordinary ground, allowing 400 revolutions to
1339 the mile, though the wheel only measured between 396 and 397 revolutions to the mile.

Q—Do you remember anything about that slough that is spoken of at that point, 1.5 deep, and running out 200 or 300 feet?

A—I don't remember it at all; I don't remember anything about it. There is nothing in this book opposite station 115 nor station 116. The note that appears to be opposite is the one that I made myself when I went back there the second time to that pond; it refers to a point back of that, where I took a back sight on one of my stakes, to get the elevation of the water in the pond; it

1340 was made on my second visit down there to ascertain more correctly the width of the water in that pond. It was not made as relating to station 115 or 116; it don't refer to any water at those stations; it refers to the elevation at the turning point back of that, and it required one sight, or one setting of the instrument from there to the water, and the intermediate stations between that point and the water were not taken; the instrument was sighted from this point there to the water surface.

Q—Will you read the memorandum that is opposite station 124; that is in Mr. Fillebrown's handwriting, isn't it?

1341 A—Station 124; yes, sir: "On east bank of long stagnant slough about four feet deep; water one foot; points running south around end of slough." I notice there is a stagnant slough "about four feet;" that is intended, I think, for forty feet, and water one foot; there is a point in between "deep" and "water" there that I think he made a mistake in leaving a zero off after the four. Opposite station 200 there is a note, "Island." I don't remember anything about that island; I think it is given on the wrong line; that is opposite 201; it might have been on one side of the line that that depression is marked. If there was a high point on either side near

1342 the line, or a low point, we made a note of it.

Q—There is a note opposite station 103 in the line of levels run from the corner of Section 28; what is it?

A—"In B. V. Slough." That is station 103, the second survey.

Q—What do you find opposite station 105?

A—At "right bank, water .2."

Q—The next station is 106.

A—"Bottom of slough near left bank; deepest water 2.9."

Q—And anything following that?

A—"Point on left bank."

1343 Q—Then what do you find opposite that? What do you find immediately below? Read the line immediately following station 114.

A—There is nothing following station 114.

Q—I mean the next line.

A—"B. S. on water surface. W. S. overflow W. line Sec. 9. South along W. line Sec. 9;" then opposite plus 30 on the same line of survey on that page: B. M. top fence post at S. W. corner fence. There is nothing in the notes to show the exact distance from the starting point which they were taken; they

1344 were taken pretty regularly at regular distances across the swamp. If you divide the whole distance across the swamp by the whole number of stations, that would give the approximate distances apart. There is nothing in the book itself that fixes the point at which they were taken, or between what stations; but, using the two books, I could tell between what stations they were taken, and whether they were taken between the stations or at the stations. The first elevation taken by me was at the starting point, at the assumed elevation of 100; the next at station 11, elevation 99.30; next at station 19, elevation 98.81; next at 29,
1345 elevation 98.66; next at 40, elevation 97.47; the next at station 49, elevation 96.55; next at 55, elevation 95.89; next at 62 elevation 96.74; next at 75, elevation 96.70; next at 90, elevation 95.65; next at 102, elevation 94.45; next at 115, elevation 94.16; next at 124, elevation 91.92; next at 125, elevation 94.32; next at 142, elevation 93.72; next at 156, elevation 92.49; next at 170, elevation 91.90; next at 183, elevation 91.55; next at 196, elevation 90.52; next at 211, elevation 90.93.

Q—Is that all?

A—Yes, sir; my notes show where those turning points were made; any one who knows anything about
1346 level notes can see that by looking at the notes, as the additions and subtractions are made at the turning points. The first note in relation to the level on the second day is:

"FRIDAY, April 29, 1881.

"Cross section of Swamp Land District 121, com-
"mencing at the corner of Sections 27, 28, 33, and 34;
"variation of 15 degrees east; thence south 16 degrees
"west."

And I also have the turning points here in connection with that survey.

1347 Q—What is the exact distance from the center of Section 12, with which you connected on your first survey, and Station 125—that is, along the line you went?

A—As near as I could get it it is 9,656 feet, and the distance from the starting point to Station 125 was 12,500 feet.

Q—When you had gone four miles in a straight course where did you then run to?

A—We ran to a section corner; we ran to a stake north of the centre of Section 12; and from there we ran to the top of the levee. In going to the top of the

1348 levee we took the same course that we had been on in going from the last station to the centre of Section 12; that is, we continued that same course that we had taken after making the deflection to run towards the section corner; we continued that straight line from the four-mile point to a stake in the levee, but did not continue in the same course we had been going across the swamp land. When we made the deflection, we ran a straight line through this stake to the levee; we ran through the stake that is marked for the center of Section 12.

Q—You say that this pond or slough was on Section 8; can you fix the pond? What part of Section 8 is
1349 it on?

A—I could probably do so by protracting it.

Q—I wish you would do so.

A—If you will give me some paper and instruments I suppose I could. It would probably take me half an hour.

Mr. HOUGHTON—Well, perhaps we had better finish the examination of this witness, and he can do it afterwards, and give us the result of it.

Q—Why did you select this point in Section 11 as the starting point in making this survey?

A—We had no particular reason for selecting that
1350 point; we might have selected any other just as well. We wanted to run through there to find out whether there was any slough in there or not, and we just struck that point, not altogether by accident. We were looking for a corner to start from; we merely wanted some known point to start from, so as to locate it on the map. We could find no stakes.

Q—What sent you to Section 11 to look for a point?

A—Well, nothing; there was no reason why we did go; we tried to find the stake before we got to Section 11; we found stakes that were marked so that we could not understand them; what they were meant for, and
1351 we went on until we got to this house; Harrold's house. We inquired of him to know if there was any corner stake there—any section stakes. He said he remembered having seen one since he was there, and that had been burned off; that he thought he knew where the mound was; where it was taken from. He showed us what he supposed to be the corner, and we started from that and ran west.

Q—That was your only reason for taking that point?

A—That was the only reason, sir.

1352 Q—Will you turn to your field notes and give us the location of that stake, as you have got it down there?

A—Cross section of swamp land District 121 from the point bearing south 10 degrees east, distant 270 feet from the southwest corner of Robert Harold's house; thence west, a variation of 15 degrees east. In going across Sections 11, 10, 9, 8 and 12, we left our direct line once or twice to get our stakes, and to get a log to tie behind the wagon; and for several other reasons; I don't remember what the other reasons were for leaving the line. The only other time that I remember leaving it was to take lunch.

1353 Q—How far, Mr. MacMurdo, would you have to run that line in a course south 16 degrees west before you would reach a point which is a mile west of the starting point?

A—I don't know, sir; if you will give me the table of latitudes and departures, I will tell you in a few minutes.

Mr. HOUGHTON—I will hand you the table.

(Does so.)

The WITNESS—In the first place I would like to state, before I make that computation, that I never went on that course. It will take a short time to calculate it. (Makes calculation.) You would have to run about

1354 three miles and fifty chains; should you go three miles and fifty chains you would have gone west 79 chains and .93—that is, seven links less than a mile.

Q—You said in your direct examination that you lived about seven miles west of here; on what portion?

A—Section 7, Township 30, Range 25.

Q—What place is that?

A—The Belle View Ranch; the ranch of Haggin & Carr; I am at work for them a part of the time; not in their employment regularly; the most of my time I am employed by them. I am County Surveyor, but do work

1355 all over the county for anybody who desires my services. Surveys which I have recently made for them have not been made by me as County Surveyor.

Q—Haven't you been in their emplayment recently; living at their ranch there for six or seven years?

A—I have been living with them the most of the time for six years; my office was down stairs in this building until appropriated by the Sheriff; the records still remain down there; my office is not at the Belle View Ranch. I have occupied an office here, and my records are here, and I have done work in that office whenever

1356 it was necessary to do so, which has not been very often. Nearly all of the business I have done for years has been done for Haggin & Carr.

Re-Direct Examination of

W. R. MacMurdo.

Section 7, to which the Calloway was completed in 1876, is about, I should think, between five and six miles from the slough; that is from where it leaves the McCaffrey Slough; I should think so; I only say by looking at the map here, Map "I;" I don't know the
1357 exact distance. When I constructed the side ditches on the Calloway, in 1879, there were other ditches being constructed by Mr. Fillebrown; prior to April, 1879, I think, about thirty miles of side ditches had been constructed. I think there were a good many persons using water from the Calloway Ditch prior to May 1st, 1879, besides those I have mentioned, and other land in cultivation besides that I have described; I gave what I remembered at the time; I could not give all because I was not familiar with the section lines at Poso Creek, and some other persons were using water that I did not
1358 give. I do not know what has been the cost of the construction of that canal per mile.

[Here plaintiffs' counsel are permitted to ask the witness a question omttted by him.]

Mr. Houghton. Q—Did you bring with you the field notes of which these plats were made?

A—Yes, sir; or copies of them.

[The witness produces book containing the field notes.]

There was nothing else in that book, except some memorandums on the last page, that I would like to keep.

1359 Mr. Houghton—I would like, if the court please, to look at this, and not interrupt the examination of the witness. I don't know that I will desire to examine him upon it. If I do, they will have the right to cross-examine him.

Re-Direct Examination of

W. R. MacMurdo

Continued:

While I did not run myself the line which is marked as high water on Map "H," I fixed points enough on

1360 it to establish the line on the map as it is there correctly, and by observing the balance of the ground in reference to those points, it is an easy matter if you have one or two points on high water mark, to take levels, to follow on out and trace the whole line as far as you please. The high water mark on Map "I," painted in green, in Section 31, Township 31, Range 25, and portions of it did extend through Sections 4, 9 and 10, 15 and 14 of that township, is correct, substantially correct. They are the same on Maps "H" and "I," as far as the different scales will permit.

Q—On this map "H," in Section 32, T. 30 S., R. 25
1361 E., there appears to be several breaks in the continuity of that slough. Can you explain to me how that occurs? What part of that did you yourself do, of that survey?

A—I ran the meander line down the slough. I am speaking now of Map "H." In making that survey I ran meander lines down the general course of the streams, as close as I could get them, following the general direction, and set stakes at every sixty-six feet; I marked these stakes in such a manner that anyone following could understand. These meander lines did not go in all of the bends, did not follow
1362 all of the bends of the bank, but kept the general course, sometimes on one side and sometimes on the other. Mr. James, who was assisting me to make that survey, would follow up and sketch in the banks by taking measurements from these stakes that I would leave near the bank. At that point, in marking these banks there as broken, at that point marked there where the banks are broken, there was some water in there, the tules very high, and it may be he did not follow out these banks all through; and I don't know anything about that part that he did.

Q—You simply ran the meander lines sometimes on
1363 one side of it and sometimes on the other?

A—I was running the transit line following down the course of the river, keeping as close to it as possible; and as convenient. To save time Mr. James followed up with a party and took the distances of the bank of this river, and any natural feature that might lay in a reasonable distance with reference to this line; starting from these stakes that I would place there. We camped together; would go out in the morning sometimes and would not see each other during all of the day, and sometimes not for two days. In a general way we were

1364 doing the same work. We were making this survey, which was to give a correct map of that country; we were doing the same work in the way; I was doing only one part of it, and he was doing the other.

Q—You speak in your cross-examination, or was saying something about the way the water went in the slough that is depicted on this Map "I," north of Bonestell's headquarters. About what sort of a current would it have?

A—The current was very sluggish and slow. If the current was a swift current through there the slough would not be as tortuous as it is, I think.

1365 Q—From the very formation of the thing it could not have a swift current?

A—No, sir. I did not notice anything particular about the character of the soil, the land on Section 15, where Mr. Crocker was raising a crop; nor did I on that occasion notice the land around in the vicinity; I have, though, particularly at other times. I don't know how that land there compares with the general character of the land through that body of swamp land.

Q—Do you remember about what was the shape of those ponds in Section 32, Township 30, Range 25, when you were running through there?

1366 A—No, sir; at that time I did not go around it entirely; I was on the right bank of the slough; that is the northeast bank of the slough; running northwesterly, it is on the east bank; I did not go over to the west side. When I speak of finding errors in the government surveys I mean the original government stakes and survey corners. They were in different parts of these townships outside of the swamp land. There was no government stakes inside of the swamp land; I don't know anything particular about stakes inside of the swamp land; I have seen them there several times.

1367 Q—Did you ever make any surveys that would show you where these stakes were; whether they were right or wrong?

A—Yes, sir; I have made surveys and joined several of these stakes there at different times.

Q—Connected them with the government corners?

A—Yes, sir; I don't know where all of the stakes are on that swamp land; I only know where a few of the section lines are.

Q—Do you know where this line, west line of Sec. 9, is?

A—No, sir; I think it was April 28 that we made the

1368 first survey across the swamp lands; I did not make any of the side notes that appear in this book of Mr. Fillebrown's.

Q—Did you endeavor or pretend to keep an exactly true line right through there, running west?

A—I set the compass to give the men in the wagon the course to go by.

Did you use the compass again? Did you run your line by the compass?

A—Only that one station; that one bearing; and went in a general westerly course.

Q—You did not pretend to keep in a due east and
1369 west line?

A—No, sir; on a general west course.

Q—Was the course that you took pretty straight or not?

A—Yes, sir, with the exception of going around that pond, until we made this deflection before reaching the pond; going around that pond we were inside the bank at places.

Mr. HAGGIN. Q—Take "L" first and then go through with each—the depressions which are shown there on this profile "L," that portion of it which represents going around the pond from Station 124—I believe you
1370 said around the south end of the pond, until you get back to 125?

A—Yes, sir.

Q—There are several points there where there was more or less depression? Do you mean there was a higher ridge around this pond at the south end of the pond, than that which you took?

A—I would not call it a ridge; I would call it the general level of the land that is higher than the line we took around there.

Q—The general level of the land was higher than that you took around there?

1371 A—Yes, sir.

Q—So that if any water came into that pond it would have to be higher than those levels which you took around the pond to get to there, the bottom of the water?

A—Yes, sir; I think so. The character of the land we were going, for the first one thousand feet on this line, was rolling; there was some hills and a few scattering tules; there was no slough through there.

(The witness marks Station 102 on Profile L, and also marks the same station on Profile M.)

1372 The WITNESS—I have no recollection of any marked depression there.

(The witness points out Station 130 on "L," and marks it.)

The elevation 93.87.

(The witness also points out and marks the same station on "M.")

Q—Is that correct on that Profile "M"?

A—Yes, sir; Station 131 is correct on Profile "M"; I think the inaccuracy pointed out on Profile "L" was at Station 102 or 103; they are both correct on Profile "M." Station 102 is correct on Profile "L";
1373 Station 103 is not correct on Profile "L". Stations 10 and 11 are correct on Profile "M"; so is Station 9 on Profile "M".

Q—How do you account for those errors in this platting of this profile "L?"

A—Well, in looking at profile "L" I notice at that point, where it is incorrect, the line is above the pencil mark. In making that in the first place I penciled it, and then filled it in with red ink, and in filling it up with ink, I see that the ink line is a little above the pencil mark; and the line requires such care, just a slight shake of the hand would make that error in the
1374 profile.

Q—Then how did you make those profiles—in a hurry or otherwise.

A—Yes, sir; they were made in a very great hurry; I had no time to go over that, and check that at all.

Q—Did you ever examine them afterwards to check them?

A—No, sir; I never did. I never saw them after I made them until they were shown to me here in Court. I have made a correct one, and have it here.

[Another profile is shown the witness.]

The WITNESS—I think this is it; that is the same as
1375 "M" on a different scale. I have compared that with the notes myself, and I know it is correct.

[The profile is produced, and marked Defendant's Exhibit P.]

That is a correct profile of the first survey of the cross-section, made on April 28, and made from the same notes as the other profiles were made from.

[The defendants offer it in evidence. It is objected to by plaintiffs on the ground that they have already offered and have in evidence three profiles of this cross-section; that if they have any correction to make in

1376 connection with the profile already in evidence they can do it by having the witness explain those already offered in evidence.]

[After discussion by counsel:]

The COURT—Is that the same which you have in your hands as the top Profile "M?"

Mr. HAGGIN—Yes, sir. It purports to be the same one; the same as that. When we were comparing that we found there were some errors which counsel had not examined him about, and I did not point out. They were all made in this same hurried way. There were none of them made with care until this one. I don't
1377 remember what the error was. It was not a material error at all.

The COURT—Is this one you have in your hands (Exhibit "P") an exact profile in accordance with these notes taken by you and Mr. Fillebrown?

A—Yes, sir.

Q—In every particular?

A—Yes, sir.

The COURT—Let it be admitted.

[Here insert.]

1378 To which ruling the plaintiffs except.

Q—What was your object in making that cross section?

A—My object was to find out whether there was any continuous channel through that body of swamp land or not.

Q—Can you explain whether or not a surveyor, in making a cross section through there, would go around any such thing as this pond?

A—I don't think he could do anything else. There would be nothing else for him to do, if that was his object, as it was ours. We continued through until we
1379 met with the pond, and to find out whether it was a pond or slough, or whether it was a lake, or what it was. We went around the bank of it, and found out the elevation of these banks in regard to the line that we were running; continued around on the ground to see whether there was any inlet or outlet to it. Had we not gone around, it would not have shown us the true state of the case; it would not have been a true profile of the country.

Q—Could you, by simply going straight through

1380 there, without deviating at all from your course, have found out what you went there to seek or not?

A—No, sir; it would not show as a pond, which is the true state of the case. It would not have been a true profile of the country if I had gone straight through. It would not have shown what it was our purpose to show. Had there been any channel along that course I should have seen it.

Q—Any continuous channel?

A—Certainly. My object in going around that pond was to see what it was. That pond was not a part of any continuous channel.

1381 Q—Could a surveyor ascertain whether there was a continuous channel there or not without going around that pond, and things that you met?

A—No, sir, unless it should happen that he struck it, and got through it in a straight line, where there would be no pond, which he might do.

Mr. HAGGIN—If your Honor please, on the direct examination of Mr. McMurdo, I asked him some questions as an expert about the condition—what would be the flow of the water there at Cole's Bridge under an assumed state of affairs? Mr. McMurdo gave an answer which entirely misled me, and he did not under-

1382 stand my question at all. It has given a false impression; an answer that he did not intend, and an impression that he did not intend or did not mean. I would like to ask him to explain.

Mr. HOUGHTON—Your Honor will remember in connection with that, that the witness was examined very fully as to what effect that levee would have upon the water running in that south fork. His answer was two-thirds would run to the lake, and one-third would run the other way. After leaving that for a time, being undoubtedly dissatisfied as they were with the an-

1383 swer, a very short time afterwards they returned to the same subject again; and the witness was very closely questioned again on that very subject, and he again reiterated what he said. He said that it would turn one-third of the water of the slough to the north, and two-thirds to the south. We object to opening this matter up in any further examination upon that point.

The COURT—(To the witness). Do you desire to make an explanation?

The WITNESS—Yes, sir, I do.

The COURT—The witness can explain it.

1384 The WITNESS—Mr. Haggin, as I understood him, asked me if that levee was not there, what proportion of the water in that would go towards Buena Vista Lake, and what proportion northward. I answered that I thought two-thirds of the water would go toward Buena Vista Lake and the balance would go towards the north. I understood his question to apply to the state of things as they are there now. As I have found them by actual measurement that two-thirds of the water will go towards the lake, in the present state of the slough and the obstruction. I also testified that there were obstructions there that prevented the water
1385 from going towards the lake. If I understand Mr. Haggin's meaning, it was, what proportion of the water would go towards the lake if the slough and the river were left in a state of nature; if the levee had never been put there, and the water flowed down the river. My answer to that would be that I think all of the water coming down the south branch of Kern River would flow into Buena Vista Lake. That that which went down the middle branch, would flow into the slough, and divide near the point where it entered the slough, and a part would go toward Buena Vista Lake, and a part toward the northward.

1386 The COURT—I think the witness has explained sufficiently.

The WITNESS—If Mr. Haggin will let me finish—I have not got through. I was going on to say that before the levee was placed there, I have seen the river, I have seen the slough, I have seen the water flowing in, and it is my opinion, from what I knew at that time, and from information I learned from others, reliable persons, that the slough has been changed materially, by putting that levee there where it is now, and that from what I know of the slough and of the river, before it was put there, and what I know of it
1387 since, I believe that that would be the state of affairs if it were in a state of nature.

The COURT—Is that all the explanation you desire?

A—Yes, sir; that is all.

The COURT—With the permission of the counsel, I would like to ask the witness a few questions:

Q—Have you observed this river, say from the Rail-rail Bridge down to where it passes into Buena Vista Slough?

A—Yes, sir.

1388 Q—How is the bed of that river? Does the water carry much sand in flowing?

A—Yes, sir; it carries a good deal of sand.

Q—It depends upon the stage of the water in the river?

A—If the river is high, of course the current has a greater velocity, and carries more sand.

Q—At the forks of the river—the south, middle and north branch—is there much movable sand at this point?

A—Yes, sir. The current of the river varies at times of high water by reason of the action of the sediment
1389 and sand flowing.

Q—Have you ever observed the slough, whether there is much sand in the slough?

A—At a good many points in the slough I have noticed a great deal of sand. I have noticed the difference in the elevation of these sand-bars in the slough at many times.

Q—Does this sand, this sediment that flows with the water, run down immediately below what is known as Wible's Camp?

A—I don't think it reaches as far down as that. It reaches a point some distance between where the mid-
1390 dle branch enters the slough and Wible's headquarters camp.

Q—Does the sand flow northwardly from the south branch in the slough?

A—It does at present, or did at the time when the levee was closed up across Cole's Bridge.

The COURT—That is all.

Cross-examination of

W. R. MACMURDO.

1391

Resumed.

Q—You were asked to give the distance from Station 125, going easterly to the centre of Sec. 12? Have you ascertained that distance?

A—Only in the same manner that I gave you before?

Q—How far is it?

A—The calculation is on the paper there; you will find it there.

1392 [Showing paper, afterwards marked "Plaintiffs' Exhibit 39."]

Q—There is where it will fall in Section 8; but what is the distance? Can you give the distance now? Let the reporter read the question.

[The reporter reads the question.]

A—I don't believe I can give the difference between the centre of Sec. 12 and that point. I can give the distance from the stake we ran to: 146 chains and 30 links. I believe I made the calculation on there: 16 chains to the point of deflection; from there on 130 chains. The whole number of stations we ran across
1393 there was 211. From that point it was 16 chains to the stake. I personally know of the side ditches on the Calloway that were constructed prior to 1879. I had something to do with the construction prior to that time. I was in charge of the ditches being constructed on Sec. 19 in the Spring of 1878, and other ditches. I was in charge of the construction of 18 or 20 miles of side ditches on the Calloway, prior to May, 1879, while they were being built; and I know of other ditches being built up to that time that I had nothing to do with the construction of; but I don't know the number of miles that were built exactly. In making the sur-
1394 veys which I testified to, with Mr. James, along the river and sloughs, I had charge of the transit party; that is, I had the instrument, and established those lines for Mr. James to make the measurement from. He established the location of all the points—of the bank and of all the natural features of the ground that we run over—in connection with the line that we had run.

Q—You ran the transit line along the slough from point to point, and he ran the offsets?

A—Yes, sir.

Q—What do you mean by saying that you meandered
1395 those lines? Is running a transit along them meandering them?

A—Yes, sir.

Q—Then that is what you mean when you say you meandered these channels of the river and Buena Vista Slough; that you ran a transit line?

A—Yes, sir. I say that I ran the transit line in the general course along the banks of these; following the general course of the instrument. I ran some offsets from those lines that I had run myself. I think this

1396 book produced by me contains the notes of all the surveys I made. Those notes do not run down to the Bonestell house. The notes of the survey running down to the Bonestell house, I don't know where they are. I thought they were copied in here, but I see they are not. These notes run down to a point somewhere in Sec. 4, T. 30, R. 24. I don't think I can produce the balance. I had copies of these notes about a month ago, and thought they were all in here. But I see they are not, only down a part of the way. They must be in another book. I will produce them if I can.

1397 Q—Do these notes that you have there show anything but the transit lines that were run along the slough?

A—No, sir; they show nothing but the transit lines. I only ran the transit lines. I correct myself. It shows some sketches here made from the sections of the road. But they are not in connection with the Buena Vista Slough. There are no sketches there in connection with Buena Vista Slough.

Q—Then, as far as Buena Vista Slough is concerned, it simply shows the transit line?

A—That is all.

1398 Q—How is that as to the south fork of the river, which you have notes of there? Is that the transit line of the south fork of the Kern River?

A—This is the transit line here of the south branch of Kern River. There are also transit lines of the Alhambra Slough. Those are the notes of the survey made by myself. The notes of the survey of the middle and north forks are also contained in this book. (The notes are offered in evidence; or the pages of the book which are marked with a small "a," also those marked with a small "b," a small "c," a small "d," a small "e," a small "f," a small "g," and a small

1399 h."

I think all of the notes of my survey are in this book except the continuation of Buena Vista Slough up to Section 24. I think I may have that. None of these notes in Fillebrown's note book were made by myself. The side notes were all made by Mr. Fillebrown.

Q—I understand you to say that your survey in running the levels around this pond does not show the true level of the land around that pond on the south side?

1400 A—It shows the true level around where the notes were taken.

Q—But it didn't show the true line around the pond?

A—I don't think it shows the general surface of the ground in some places. [Profile P differs from Profile N, between stations 195 and 199.] There is a correction there. I don't think there is any other correction on that profile that was not made from Profile N.

Q—I understand you to say that your object in going across there was not to fix the levels of the country,
1401 but to find out whether there was a continuous channel running through there. Is that so?

A—My object in going through there was to find out the general level of that country. My object was to find out whether there was a continuous channel. That was the purpose for which I ran the line.

Q—Why didn't you run the levels then around the north end of the slough?

A—I did take the levels around the north end.

Q—Why didn't you do it the first day you were there?

A—Because when I went around the south end of
1402 the pond it had no inlet to it, and the ground was as high as the ground of the surrounding country, and I saw there was no necessity of having any other levels around the north end of it. I was satisfied, in my own mind, that the levels we had taken, that it was not a channel.

Q—Then, what occasion was there for you to take the trouble of going back and running around the north end?

A—It was only to satisfy myself more thoroughly about the pond, that it had no outlet as well as inlet.
1403 The reason we did not go around to the north to look for other depressions was, because we found no depression of any note besides this one. The waters of Kern River carry sand into and down Buena Vista Slough. But I cannot definitely fix the point where it ceased to carry sand. I think it is somewhere on Sec. 23, T. 30, R. 24. If there is any sand carried below there, I think it has only been recently. I was along that part of the slough several years ago, hunting, and crossing at various times, and I don't remember having seen any sand in the slough below that point. If

1404 there was any sand in the water I would possibly have known it.

Re-direct examination of

W. R. MACMURDO.

To Mr. HAGGIN—When I went back to ascertain whether there was any channel running north from this pond, I did not go of my own volition. I think I went back at your request. Had it been left to me, I would not have gone back. I was satisfied with the
1405 first line we had run through there. I think I said it was Sec. 23, on T. 30, R. 24, where the sand ceased flowing in Buena Vista Slough. I have been down on the slough when it was nearly dry; when it was nearly dry. I have never been down there when there was not water standing in holes. I have seen sand very nearly to that point. Below that the slough was pretty much all deep. There were holes all along there. But I don't remember having seen sand. I have seen it down as far as the crossing of Sec.—as far as the northwest corner of Sec. 24, T. 30, R. 24. And I don't think I have seen any sand beyond that. Never
1406 saw any sand north of the levee at Wible's camp. I have been through portions of that slough north of Wible's camp when portions of it was dry. Had there been sand there I should have seen it.

(Mr. Houghton produces diagram made by witness, which has been marked Plaintiff's Exhibit 39, and offers it in evidence in connection with the testimony of Mr. McMurdo.

To Mr. HAGGIN—I made that exhibit; it is made on the scale of 20 chains to the inch; made from no survey. I platted that out, supposing the sections to be 80 chains square, and all of them perfectly rectangu-
1407 lar. It has no reference to section corners on the ground. I don't know where the section corners are on the ground with reference to Sec. 12. I don't know anything about them at all.

Q—Then this is simply a mere rectangular scale, that has no particular reference to anything?

A—I think not. I don't mean that it illustrates the course that we took through these particular sections.

Q—What is this red line here in the centre of Sec. 8 on Exhibit 39?

1408 A—That is put there approximately to represent our course in going around this pond. That is supposed to be the pond we have spoken of. I don't know that the pond comes on Sec. 8, as 8 is surveyed on the ground. I don't know where Sec. 8 is on the ground.

Q—Then this exhibit does not show your course at all that you took through there?

A—No, sir. I think not; not with regard to any sections.

Mr. HOUGHTON—Q—I understand you that you made this diagram in connection with the calculations as to
1409 where this slough would fall in Sec. 8, starting from the post marked "one-fourth," as representing the centre of Sec. 12?

A—Yes, sir. I made that at your request, starting from that stake, supposed to be in the centre of Sec. 12, following my course, and then plotting sections in there, supposing each section to be eighty chains square. If that marked "one-fourth" represents the post we reached, then our course is traced on there approximately correct.

Q—If this mark "one-fourth" represents the post which you ran, then you traced in here your course?

1410 A—Yes, sir, approximately, as well as I could do with the instruments and things I had. This is on a scale of one inch to 20 chains.

Q—And this, approximately, shows where that would fall, running the number of feet, or chains, you say it is, from the stake you found?

A—I cannot tell anything about that—where it would fall in Sec. 8. I know that there is a difference in the section lines down there—a considerable difference in some of them—and that might fall on the west or east side of Sec. 8. I think it falls in Sec. 8.

Q—Do you mean that there is enough error in these
1411 lines there to throw that line which you have put about one-third through Sec. 8, over to the east side of it?

A—I believe there are errors entering into some of these sections that would change that point a quarter of a mile.

Q—In that township?

A—In that neighborhood. I know there no government surveys in that swamp. Government surveys have been made the other side of the swamp from different initial points, and, in closing these surveys

1412 across the swamp, it makes a large difference in the section lines — Sec. 8, in that township — a line of it may be a mile and a half long, or less than a mile long. It may be. I don't think there are any government surveys made from the swamp land, to connect these two surveys—one from the east and the other from the west. I know some of these surveys to be a mile out of the way; not in that township, in other townships. And there were the same reasons for them to be so in that township.

Q—You have connected Government corners in that township with your own surveys?

1413 A—Yes, sir.

Q—How did you find them?

A—Some correct and some not correct. The corners that I connected with my survey were all on the same side of the swamp. If I had connected with the other side I would have found a great difference. I I found them, approximately, correct. I have joined upon the same township stakes in that township—that is, on the line between that township and the one next east. I will correct myself in that; it was in the township east of that.

Q—Didn't you ever connect with any Government

1414 lines in that township?

A—No, sir; I never connected with any Government lines in that township, I don't think.

Q—Not when you ran your transit lines through there?

A—No, sir; I think not.

Q—You did not connect with any Government corners then?

A—I think not.

Q—Didn't you start from the Government corner where you ran through there?

A—No, sir. I don't know that the initial point I

1415 started from was a Government corner; I don't think it was.

Mr. Haggin—Did you ever locate this quarter section corner on Sec. 12, which is supposed to be drawn here on "39"?

A—No, sir; I don't know where it is.

Q—Do you know, as a fact, that this Exhibit "39" is correct?

A—No, sir.

Q—Do you know, as a fact, that this represents anything at all?

1416 A—No, sir; I do not.
[Exhibit 39 is here offered in evidence.]
[Here insert.]

JACOB HAYS,

A witness for the defendant, being duly sworn, testified:

Q—(By Mr. FLOURNOY)—Where do you reside?
1417 A—In Kern Co., on Poso Creek, on Section 19. I have not got the township and range. I believe it is Township 28, if I am not mistaken. That is something I have not paid any attention to, the township and range. I don't know that I can point it out on the map. I believe that is the section—there, that I am on [referring to Map No. 4], Section 19—there.
Q—That would be in Township 29, Range 25?
A—Yes, sir.
Q—How long have you lived there?
A—I have lived there since the middle of August, 1879, at that place, on that section. I have known
1418 the Calloway Canal since the latter part of January, 1879. On the first of May, 1879, the Calloway Canal was constructed within half a mile or three-quarters of a mile of Poso Creek. It was what we considered completed to that point. There was some work done clear on through to the creek—some plowing and scraping, complete within half a mile or three-quarters of a mile of the creek, and some scraping done through to the creek on the first of May, 1879.
Q—Were you doing any work about there at that time?
A—Yes, sir. I commenced work digging outside
1419 ditches on the first of April, 1879.
Q—Do you know whether there was any work going on on the Calloway Canal on the 1st of May, 1879?
A—Yes, sir; there was work going on on the canal at that time. The number of teams that they had at work at that time varied. I think there were all the way from 11 to 22 teams, was the highest that was on it at one time.
Q—How many horses in a team?
A—Four-horse teams.
Q—And they were working on it on the 1st of May, 1879?

1420 A—As near as I recollect, they were at work on it then. I can't say positively that there was that number of teams on there. A part of the teams on that and a part on the side ditches. They seemed to be working a little at both.

Q—How many teams did they have on all the side and main ditches?

A—I only got my information from Mr. Anderson; still I was in sight of them.

Q—State what you know yourself?

A—22 teams was the most I ever saw there at one time.

1421 ———

Cross-examination of

JACOB HAYS.

Q—(By Mr. HOUGHTON)—Are you farming on that canal?

A—Yes, sir; a tenant of Haggin & Carr. In 1879, from the statement of the surveyor, I had in cultivation 800 or a thousand acres myself. I was not there in 1878.

———

1422 Re-direct examination of

JACOB HAYS.

Q—(By Mr. FLOURNOY)—That was your crop of 1879 you speak of?

A—Yes, sir; that was our crop of 1879. I had myself between 900 and a thousand acres.

Q—Was there anybody else farming there in that neighborhood at that time?

A—Yes, sir.

Q—Taking the water from the Calloway Canal?

1423 A—Yes, sir. There was Jacob McMillan on Sec. 29; J. G. Taylor on Sec. 21; E. Manly on Sec. 27; J. F. Creasy on Sec. 17; Mr. Neal on Sec. 26, I believe. I think Mr. Creasy had something near 800 acres in; Mr. Taylor had about 750; Mr. McMillan about 650, and Mr. Manly the same. And Neal, I think, had about 500.

Q—Were there any others that you know of there in that immediate neighborhood?

A—Not in that immediate neighborhood, except the company land, what they farmed themselves. It is all

1424 in the immediate neighborhood; what the company farmed themselves. I think they were farming themselves 1400 acres. It was in the fall of 1879 that the crop was put in; and the Spring of 1880.

Q—How many of those tenants or gentlemen that you have named lived north of Poso Creek?

A—Mr. Neal lived north of Poso Creek. Mr. Taylor lived north of Poso Creek, and Mr. Creasy.

Q—Did they use the water from the Calloway in their crops of 1879?

A—The crop that they put in in 1879, perhaps they might have used some water in 1879. In the Spring
1425 of 1880, they used water. There was water there in the Calloway in 1879.

Re-cross-examination of

JACOB HAYS.

Mr. HOUGHTON—Q—These tenants got no water from that canal prior to June, 1879, did they?

A—No, sir, I think not.

Q—This crop that you put in of 1000 or 900 acres
1426 was put in in the fall of 1879?

A—Yes, sir.

Q—The crop of 1880?

A—Yes, sir.

Q—Were all those persons you have named tenants of Haggin & Carr?

A—Yes, sir, they were all tenants of Haggin & Carr.

J. F. CREASY,

A witness called for defendant, being duly sworn, tes-
1427 tified:

Mr. FLOURNOY—Q—Where do you reside?

A—In Kern Co., on Poso Creek, on Section 17, I think it is on township 26, range 25. On the north side of Poso Creek. I have resided there since 1879.

Q—Do you know where the Calloway Canal was completed to on the 1st of May, 1879?

A—It was completed past the Poso ranch or nearly down to Poso Creek, may be half a mile, not more than half a mile.

Q—Do you recollect whether any work had been done on the canal beyond the point of its completion?

1428 A—There was work done all the way to the creek; there was water in the canal from about the 1st of May, 1879. I won't say the 1st of May, but about the middle of May, there was, I know.

Q—How far did that water go?

A—Sometime in May, I cannot remember certainly, but sometime in May, there was a small stream of water that went through the canal and into Poso Creek. I remember seeing a small stream of water sometime in May passing down Poso Creek.

1429 Cross-examination of

J. F. CREASY.

By Mr. HOUGHTON—Q—You are a tenant of Haggin & Carr, are you not?

A—Yes, sir.

Q—What time did you go there in 1879?

A—May, 1879. I think it was on the 14th of May I got there and commenced work. It was only a short time, a few days after that, that I saw the water. I was crossing the creek when I saw it. I suppose
1430 two miles below where the Calloway Canal crosses it.

Q—How do you know the water came from the Calloway?

A—There was no water in Poso Creek above the Calloway.

Q—That is all you know about it?

A—Yes, sir.

Q—You didn't see the water running out of the Calloway?

A—No, sir, not on that day.

Mr. FLOURNOY—Q—You satisfied yourself that that was the fact afterwards?

1431 A—Yes, sir. I saw the water in the Calloway afterwards.

W. R. NEAL,

a witness called for defendant, being duly sworn, testified:

By Mr. FLOURNOY—Q—Where do you reside?

A—I live in Kern County, on the north side of Poso Creek, a very short distance from the Calloway Canal—on Section 26, I think, Township 26, Range 25, if I remember right. I moved there in August, 1879. I first

1432 became acquainted with the Calloway Canal in the spring of 1879—April, sometime.

Q—Do you know how far the Calloway Canal had been constructed by the 1st of May, 1879?

A—It was within less than a mile of Poso Creek, I think it was constructed; there was some work done to the creek. The first time I ever saw the canal I came to it at that end.

Cross-examination of

W. R. Neal.

1433 By Mr. Houghton—Q—Were you living or working on the canal in May, 1879?

A—I was not working on the canal in May, 1879.

Q—What were you doing when you saw it in May, 1879?

A—When I saw it the first time I was coming down to see Mr. Carr, with the intention of renting land from him. I followed along the canal up to the Poso Creek ranch, along by the side of it.

Q—What time in May was that?

A—I don't think it was in May that I came to it; I think it was in April the first time I saw the canal in
1434 May.

Q—Where were you in May?

A—In May, I think I had my teams and occasionally I was at work with my teams.

Q—On the canal?

A—No, sir; on the side ditches of Hays & Co. We commenced work there on the last of April or the first of May. I think we worked two days in the month of April; we were at work on some side ditches that started out from the canal somewhere not far from the Poso Creek or Home Ranch.

Q—You were starting right from the ranch?

1435 A—Yes, sir.

Q—Was there any water in the canal when you started in to work there?

A—Yes, sir; there was water in the canal at times when we worked there.

Q—Was there water in the canal when you commenced work there?

A—I don't know that I can answer that question positively whether there was or not.

Q—How long was it after you went there before you saw water in that canal—about how long?

1436 A—It was somewhere between the first of May and June that I saw water there in that canal at the head-quarters camp.

Q—Did you see it go beyond there at any time in May?

A—I could not say that I did.

Q—Didn't they have a dam down there across the canal at that time to stop the water from running any further?

A—I think they had, sir. I think they had a dam across the head of the canal. I am a tenant of Haggin & Carr.

1437 ———

THURSDAY, May 27, 1881.

Re-cross examination of

W. R. MACMURDO.

Resumed.

By Mr. HOUGHTON. Can you tell me where the initial point is that you started from on this survey, commencing on the third line of the page marked "A" [showing book]. Where is it on the ground? Where is that station?

1438 A—That is not the initial point. That is the continuation of the line.

Q—Where was the initial point that you started from in making this survey?

A—I commenced on the 7th standard line, at the quarter section stake, and mound on the north boundary, Section 2, T. 29, R. 28. That was my starting point to reach the other point of continuation. The courses and distances that I ran to reach that point are here.

Q—In your book, opposite there, are they?

A—Yes, sir; those notes are all made by myself.

Q—Are these other starting points or initial points
1439 of these other surveys connected with that same initial point, or connected with this on page A.

A—Yes, sir.

Q—Then taking that starting point that you have given at this quarter section post, you referred to in these notes, you could follow that through and reach the initial point of any given survey in this book on the south fork of the river and on the slough.

A—Yes, I think so. I have here the notes of the second survey which I made on Buena Slough, and which I did not have in Court yesterday. The loose

1440 leaves are the ones. These are all the base lines, the transit lines and the others are the offsets from that line. Iran all of the transit and offsets. The transit lines of that survey and a part of the offsets. Mr. Dixon ran some of the offset lines. The book which I now produce, and which is marked Swamp Land District, No. 121, has all of the field notes of the survey made by me in 1880. All of the transit lines that appear in that book are run by myself, and the greater portion of the offset lines. I don't remember exactly how many. I would send Mr. Dixon to run some of the offsets while I was making some sketches of the slough, or some-
1441 thing of that kind. I did not run them all. I could not tell by that book how many I did run. If I had anything to occupy my attention in the meantime, I would ask him to take an offset from a certain station at the bank of the slough, and from that point to definite points on the bank, so as to enable me to sketch in the flats, you see, on the back of the leaf there.

~~[Here insert.]~~

These notes represent the survey from about Sec. 4
1442 down to below the Bonestell house.

Q—I understand you that the map was made and platted from the survey—that is, that slough?

A—No, sir. I said the slough was not platted by myself on that map [referring to Map "I"]. I believe that is what I stated when I was questioned in regard to that slough. I said that I made a part of that map.

Q—You testified that the slough was correct, and that you had checked it off with these notes?

A—Yes, sir.

Mr. HOUGHTON—I offer in evidence the notes contained on pages 1 and 2, so far as they refer to the tran-
1443 sit lines, but not as to the offsets:

[The witness reads them as follows:] "Saturday, "May 1st, 1880. Commencing at township corner of "T. 29 and 30, Ranges 24 and 25, M. D. B. M., "variation 14° 15′ east"—I will read the heading to each column as it comes [continues reading] 'station,' 'plate,' 'course,' 'needle,' 'distance'—"west 119 "chains 38 links to a point 20 links north of "quarter section stake; the north line of Sec. 2, "150 chains to the east branch canal—Kern Valley "Water Company's canal—158 chains to edge of

1444 "water, 238 chains 18 links to a point 46 links north "of the stake on township line; north line of Sec. 3 "and 4, 240, set small stake 318 chains and 83 links to "a point 37 links north of corner of Sec. 4 and 5, T. "30, R. 24, 324 chains and 20 links, 328 chains and 50 "links to the right bank of Buena Vista Slough."

The meander line of the slough commences here, the first station being zero, "37° 14′, R. N. 52° 46′ west, "N. 53° W. 24 chains 20 links 24+20, 16° 27′ left; N. "69° 13′ W; N. 69° 30′ W., 24, 80, 49, 42° 45′ R.; N. "26° 28′ W.; N. 27° W. 41 chains; 90, 13° 40′ L.; N., "40° 8′ W.; N., 48° 30′ W. 40 chains; 130, 6° 52′ R.,
1445 "N. 33° 16′ W., N. 34° W. 45 chains; 175, 25° 37′ L., "N. 58° 53′ W., N. 59° 45′ W., 101.15, 276+15."

There is a note opposite the last column, station 178: "In bend of slough 276+15, 21° 36′ R. N. 37° 17′ W., "N. 38° W., 11, 85, 288 to end of any defined bank."

The point where the water in Buena Vista Slough spreads out on the plains from station 276+15, the lone willow bears north 35° W."

The balance that follows this is the balance of the survey offsets from these lines, and these sketches on the opposite side of the page, a part of the notes. And without these sketches and the explanation of them
1446 it would be hard to understand the balance of the notes. They were taken in the field from measurements and observations, the most of them by myself — I think a great many of them by myself, but I cannot say which; the most of them were made by myself, but I don't remember which ones. I remember having asked Mr. Dixon, on one or two occasions, to take bearings from a point that I named to him, on the line where I was standing, on the bank of the slough, and chain up to that point, and I put the note down on my book and sketched in the slough along that point, from that to the next point. In starting
1447 from the township corners of 29 and 30, Range 24 and 25, I have a note of the distance there. I went along there 119.38 chains to a point 20 links north of the quarter section stake, at the north line of Sec. 2; then on down in the same course 324 chains and 20 links— that is the point marked zero on the next note that I made. These two points are identical. They are the beginning of the meander line along the slough from which I took these offsets. I would also like to state that this point of beginning is from the Government

1448 corners, and the balance of the notes I have made in here of stakes on the north line are stakes set by some one else, and are not Government surveys. And I have failed to close on those stakes, as my notes will show.

Starting from Government corners, I was enabled to complete these surveys and this meandering without the necessity of having the other corners. This survey of slough which I have read off is the continuation of that which is marked 38, and put in evidence, and marked "G" in this case. The line marked "G" in this book commences at Station 21, plus 13, following the line to "F." "F" commences at Station 1813,
1449 plus 75. This is a continuation of the line "G," commencing at Station 2419, plus 75, on line "G."

Q—That which you just read is a continuation of this, which is marked "G;" in this book is it?

A—It is not a continuation of same line. It is a continuation of the survey of the swamp from that point. Beginning at the township corner. Line "G" commences near Cole's Bridge, and runs along the east bank of the slough part of the way, the most of the way up to the point where the continuation of line "G" commences. Then it continues on to a point near the end of Weed Island. The notes which I have just
1450 read commence at the Township corner of 29 and 30, Ranges 24 and 25, and then runs west to a point near the bank of Buena Vista Slough; thence from that point northwesterly along the slough to its end. There is a short gap between the two notes. I have surveyed a part of that down from this point, where I first struck the slough, down this way. But there are no notes in this book. I think the offsets will show it running from that point in the other book. From the point where I stopped before, the slough being dry, I was not able to make any survey of it, because I could not trace out the banks of the slough. They were so un-
1451 defined that I left the gap in there, and was unable to finish it. It was overgrown with tules, the most of it. The banks were undefined, and it was a very hard matter to make a survey of it and locate the slough through that portion of the swamp. When the water is running in there, you can follow that portion of it out; but when it is dry, it is almost impossible to do it.

The COURT—In what section is that?

A—That is in Sec. 4, T. 30, R. 24. It runs diago-

1452 nally through that section. These notes show no meandering through there, except near the point where I first struck the slough, for a short distance southward. From that point I first took the notes of the way the slough ran. I went along right through there and located it from observation as well as I could.

Q—Then you have examined that portion, have you?

A—Yes, sir.

T. R. Fillebrown,

1453 Recalled for defendants.

Mr. McAllister—We would like to know upon what new points Mr. Fillebrown is to be examined, as he has been on the stand 3 different times.

The Court—[After discussion]. The limit I shall impose on this witness is, simply, that he shall not be permitted to be examined by counsel. If there is any portion of the testimony which he wishes to explain, or any change, he can make an explanation of his own accord.

The Witness—That is all that I wish to do. I would like to state right here that I requested to be called on
1454 the stand for the purpose of making this explanation in my own behalf. When I read the notes before I did not claim to read all of my side notes, except those which I thought would have some bearing upon the subject. Any surveyor, in making a survey, will frequently make side-notes for his own reference and convenience, which perhaps do not cut any figure in the case at all, or have any bearing on the survey. I was requested to read my level notes, and I proceeded to so, and at the same time read such side-notes as I thought would have any influence whatever.
1455 I would now like to read all my side-notes, including those that I have already read, so as to be sure of getting them all out. I cannot state exactly which I did read, and make such explanation as seemed to have been called for from Mr. Macmurdo, which I could have made, and which he could not. I will not read my level notes, but only such side-notes as I have made. [Reads]:

"Survey, April 28th, 1881, level across Buena Vista
"Slough, from a point near T. R. Harold's hog camp
"due west; Fillebrown at the level; Macmurdo at the

1456 "rod, and Jackson & Dixon at the odometer." The first side note that I had made was at Station 21, "Leave tules." At Section 44, "Enter tules." At Station 63, "Leave tules and enter wire grass." At Station 75, "Bull Island 150 feet left." The explanation of that note was asked for from Mr. Macmurdo, which he could not make, and I can. I have heard since giving my former testimony that there is an island in that swamp somewhere, generally known as Bull Island. I don't know where that is. But I would say here that the Bull Island I have reference to may or may not be the same. My reason for calling this Bull Island was that
1457 as we approached it we saw a large bull standing up on top of this high point, pawing the dirt. Some remark was made about it. When we got near enough so that I could note just about how far that was off the line, I did so. It is a little high alkali knoll, 3 or 4 feet higher than the ground over which we passed. At Station 89, "Enter small tules." At station 96, "Enter high tules." Opposite Station 98 I noted, "870 revolutions to slough, about $1\frac{5}{10}$ feet deep; runs out in 2 or 3 hundred feet."

The slough that I noted there was a slight depression which I estimated to be $1\frac{1}{2}$ feet deep. No water in it.
1458 A little dry arroyo. But as I could see to the termination of it, both right and left, I did not represent it at all on my profile, knowing that the ground was continuous high ground on both ends of it. For that reason it would have been incorrect rather than an ~~in~~correct representation, if I had shown it on the profile. There are a few notes here made by Mr. Macmurdo, at a subsequent time, which I will not read. They were explained by him, I think. At Station 124, "On east bank a long stagnant slough about 4 feet deep, water 1.0."

1459 Then on the next line I commenced a detour around the pond or slough, and note points running south around the end of the slough. At Station 12 on that detour line, "At southeast extremity of slough or pond, 15 chains." Opposite Station 13 note, "S. end of pond." I also made a note here, "Water is perfectly still on this pond, except a slight movement to the southward, caused by north winds." At Section 20, "At southwest extremity of pond." Station 30 corresponds to 125 of the original line. "Point on the west bank of pond on original line."

1460 Between stations 163 and 164 I have a note on the opposite page, "Dry pond 1 foot deep."

Opposite Station 183 I did not make a written note, but I drew a light line across the centre line on my page to indicate a small arroyo that happened to be shown by the elevation of the station itself. It happened to come right at the arroyo.

At station 191: "leave tules" at station 200: "Island." That note was evidently intended for the next line, and by mistake put one line too high, because the elevation at that station is lower than the one following it, by six-tenths or so.

1461 Opposite station 208: "Island." I recollect that: a little alkali knoll we had run over. The summit of it ran further north probably. The summit of it was probably a foot or two higher than the elevation represented by the level note.

Station 212: "1600 revolutions equal 4 miles, from which point a post. At the centre of Sec. 12, T. 29, R. 22, bears south 74° west, 80 revolutions equal to 16 chains."

I assumed that 1600 revolutions should equal four miles. That would be just 400 revolutions to the mile. The actual measurement of my wagon wheel made it
1462 a trifle over 396 revolutions to the mile. But I have found by trying that, owing to the unevenness of the ground, 400 revolutions to the mile comes out about right. Those measurements were not expected to be absolutely correct, but near enough for any practical purposes. I told the men who were driving the wagon and counting the revolutions of the wheel, that it would take 400 revolutions to the mile.

I note: "98.38, top of levee of Kern Valley Water Company's Canal near the centre of Section 12." Those are all of the notes on the first line of levels. The notes on the second line—I don't know of any-
1463 thing I am anxious to explain in connection with those notes, except that the effort was made to make it appear that I had claimed to run the whole 114 stations in a direct line S., 16° west. I did not claim to. I think I stated in my former testimony that I made a deflection to the right at station 92, and another deflection to the left at station 95, and that therefore my course was more or less uncertain, but I think the effort was made to have it appear that I had claimed to run 114 stations in a direct line, which I did not claim.

1464 Also, after leaving that point, my meanderings through that water was on a very uncertain line. I did not claim it to be direct. Our estimation of distance was only approximate—only an estimate. I did not claim it to be correct. And the estimate of my direction after that was more or less uncertain. I don't think of any other explanation to make.

Cross-examination of

T. R. FILLEBROWN.

1465 By Mr. HOUGHTON—Q—Do I understand you to say that you read all of the notes?

A—I think I did, sir; all that were made by myself.

Q—Do I understand you to say that you read the note which reads: "On east bank a long stagnant slough, about 4 feet deep; water, 1.0; points running south around end of slough."

The COURT—You did not read that this time?

A—Beg pardon, I think I did. That is a note made by myself. I am sure I read it a moment ago. It is opposite Station 124. The second line is opposite Sta-
1466 tion 1 of the detour line.

WILLIAM MCFARLAND,

Being recalled for the defendants, testified:

Mr. FLOURNOY—Q—You were sworn before, I believe?

A—Yes, sir.

Q—Have you had any acquaintance with Buena Vista Slough, about Cole's Crossing?

A—Yes, sir; I first saw it in 1872. I think it was along late in the summer or fall—about August or Sep-
1467 tember. There was no bridge there at that time, nor any levee. There was considerable water there in 1872.

Q—Did it have any current?

A—Yes, sir; at that point it was flowing south, at what is known as Cole's Bridge now.

Q—Did you see any water at that point flowing in any other direction?

A—I saw water at the Tracy Crossing. If it was running any way it was running north; but as near as I can recollect now, it was very still.

1468 Q—It was still at Tracy's Crossing?

A—Yes, sir. It might have been running north a little. I didn't take particular notice. My recollection is, that the water was not running at Tracy's Crossing; was still; but was running at Cole's.

Q—Where were you going at that time?

A—I was going down the slough; going to the Templor Ranch, to Crocker's Ranch, to register voters for the county seat election. The Templor Ranch used to be Mr. Crocker's headquarters when he lived there at that time, in 1872. I was over there to see if there were any voters
1469 that was not registered; to get them on the Great Register of the county, so they could vote.

Q—What evidence did you see of any headquarters being about there at that time?

A—There was a house there; a dwelling house. Mr. Crocker was there, and his men. The same as any other ranch around there. I didn't see any cattle directly at the headquarters; at the house. I saw cattle through the canyon in the mountains before I got there. There were preparations for cattle there. I saw troughs there for watering cattle: probably 8 or 10.

Q—Plenty of water, or was there water there at that
1470 time?

A—Yes, sir, there was water there. I didn't examine very closely where the troughs were. There was quite a stream running out by the oil wells—what was known as the oil wells—through there. That was not on the Templore Ranch. I think that is what is called the Santa Maria. You have to ride through that way to go to the Templore.

Q—What did the cattle have to live on in that section of the country? What was the kind of growth?

A—None close to the mountains. Alfilleria, where there
1471 was any; where there was not, they didn't have it. I was next at the Templore in the Spring of 1874. I understood it was Mr. Crocker's headquarters at that time. I think he lived there. He was living there in 1872. I was also there in the Spring of 1875, along in March. I think Mr. Crocker was living there then. I don't remember. Mr. Crocker moved down here sometime, I think, in 1875; moved his family down here, I think, in the Spring of 1875—in fact, I am positive that he was there in 1875. That was his headquarters at that time.

Q—How far did he range his cattle, to your knowledge,

1472 around there for instance, 1872, '74 and '75, the times you passed along through that section?

A—I never went any further around than the Polonio Pass. I have seen cattle all along there in the Spring of the year. I saw the cattle all down Buena Vista Slough or the swamp. I mean the swamp land district down there.

Q—Do you know where the Polonio Pass is?

A—I know the Polonio Pass. I have passed through there.

Q—Did you ever see any cattle ranging down in there?

1473 A—I never saw them away up in the Polonio Pass, but at the mouth of it, what they call Antelope Valley. I think I have seen cattle in there.

Q—Is there any circumstance that reminds you of their being there? How came you to recollect that?

A—Well, I was assessing through there in 1874 and '75. I was looking for sheep, cattle, and one thing and another, taking notice of them.

Q—Did you ever have, as an officer, any special call in that section of the country?

A—Yes, sir. I was up in the Polonio Pass with Mr.

1474 Jackson at one time, when I was in the Sheriff's office, as Deputy Sheriff.

Q—Did you ever go down to San Jose to make any arrests about that time?

A—Yes, sir. That was not in 1875; that was in 1876, I think. There was a warrant out for killing cattle belonging to Cox & Clark.

Q—Have you ever seen any of Mr. Cox's cattle in Polonio Pass or Antelope Valley?

A—Yes, sir; in the spring of 1874 and '75 they were there. I suppose they were ranging there. I didn't stop there any lenghth of time; I just passed there.

1475 Q—Will you look at this map (map produced, marked "Defendants' Exhibit Q") and state from that map the point you have seen his cattle ranging at? There is the point that you name there—the Templore ranch. Just describe any point on that map that you have seen his cattle ranging on. This is the Polonio Pass here, and here is Antelope Valley (showing on map "Q.")

A—I have seen his cattle in here at the Santa Maria. I have seen cattle in this valley, back of the oil wells here. I think this is the Santa Maria Valley.

Q—Is this the point you mean by the Polonio Pass?

1476 (Pointing on Map "Q.") J. C. Crocker is marked there. Is this what you mean by the Templore ranch?

A—Yes, sir; that is what I mean by it. That is Miller & Lux's ranch; marked Miller & Lux's ranch. Where Crocker's name is, I think, is where the house is.

Mr. HOUGHTON—I understand they are simply using this as a diagram.

Mr. FLOURNOY—Yes, sir.

Q—Is that mark there the place you speak of as embraced in the Templore ranch?

A—Yes, sir.

Q—You said you had seen cattle ranging down here in
1477 Antelope Valley and Polonio Pass?

A—Not in the pass. I have seen them along in here (showing), in Antelope Valley.

Q—Have you seen them ranging anywhere else on that map?

A—I have seen them down in the swamp land all along, as far as Epperly's hog camp, or what is called Epperly's hog camp now.

Q—How far up towards Kern Lake have you seen them, or Bakersfield?

A—I have seen them in early times—I think I saw
1478 Crocker's and Miller's & Lux's cattle down at Canfield. As a general thing, when you go down the slough here, across the slough at Tracy's crossing, you would probably commence meeting a few of the cattle away down; sometimes would be in a big band and sometimes only a few.

Q—Did you ever see any head-quarter appearance of this swamp land district 121?

A—No, sir. I never knew anybody that lived beyond that point but Epperly, between Tracy's crossing.

Q—Did you ever see Crocker's camp down there?

A—I have seen Crocker's vaqueros along there, rodeoing.

Q—What preparation, in the way of a camp, down in
1479 the swamp land district?

A—The same as any rodeoing party; had the outfit along with them.

Q—Did they have their wagons and teams?

A—Yes, sir; they had a regular camp outfit along.

Q—Any indication of a permanent locality?

A—No, sir.

Q—Well, was it any different from what other cattle men carry along with them in all their camps—the general range of cattle parties?

1480 A—No, sir; the same as I have seen them have—all parties.

Q—Have you ever seen any cattle ranging in that swamp land district belonging to other people?

A—Yes, sir.

Q—What people?

A—Well, I don't know the brands of all of them. I only know by seeing the different brands, and being acquainted with other parties that had cattle in there that were rodeoing.

Q—When did you next see Buena Vista Slough at Cole's crossing, after 1875?

1481 A—I saw it sometime in the Spring of the year of 1876. I was appointed by the Board of Supervisors to go down and examine that levee and bridge there, to see what caused the damage. N. R. Wilkinson was appointed with me. We made an examination of that bridge, pursuant to that order of appointment, and made a report of our examination. I remember some of the contents of that report. I think I would recognize the report if I were to see it.

Mr. FLOURNOY—It is offered to refresh the witness's memory. (Showing the report to the witness.)

1482 The COURT—It is the same that has been testified to by Mr. Wilkinson.

Mr. FLOURNOYY—The same one. Look at it and see if that is the one?

A—Yes, sir; that is my signature; that is the report.

MR. HOUGHTON. Q—Is that in your handwriting?

A—No, sir; only my signature, that is all. The signature is in my handwriting.

Mr. MCALLISTER—I suppose all the report can be used for would be to refresh his recollection; it cannot be used as a report.

Mr. FLOURNOY—That is all I offer it for.

1483 Mr. MCALLISTER—He can take the report in his hands and state any fact that came under his observation; he cannot read it as a report.

Mr. FLOURNOY—I don't ask him to read it, I ask him to read it over, and inform himself whether this is the report made by him at the time, or under his direction; if it is substantially what he stated.

Q—What did you do down there—what did you observe there?

A—I found that there had been a dam constructed on the immediate south side of the bridge, and water had backed up to such a height on the north side of the

1484 bridge that it had washed the dam out in the center about six feet, and let the water go through there with such force underneath the bridge that it washed the piling away, and let the bridge down, and damaged the causeway leading to the bridge, by backing up from the north side.

Q—What caused this injury to this bridge, according to your observation at that time?

A—The dam being placed across that Buena Vista Slough and obstructing the water from running into the lakes. That is what we reported. It stopped the water from running south into the lakes. We found that Sou-
1485 ther was the man that caused it to be done. He had put a dam across and turned the water away; obstructing it from running south into the lake, and this had caused the injury to the bridge by ponding the water up on the north side.

Q—How did that happen? Did it interfere with the natural force of the water; that dam?

A—Yes, sir; It kept the water from running into the lake. The way it always used to run at that point.

Q—Was that the natural course of the water to run into the lake, at the time that dam was constructed?

1486 A—Yes, sir. It broke through and run over, and caused the damage to the bridge.

Q—How high did you observe the water ponded up on the north side of that point, or that it had been?

A—I think it was somewhere between 3 and 4 feet higher on the north side, than it was on the south side.

Q—Have you ever been back there subsequently?

A—Yes, sir.

Q—Did you ever see any head-gate about that crossing?

A—Yes, sir, I saw it this year. I saw it in 1877, I think, the same head-gate.

1487 Q—Will you describe how that head-gate is constructed? Was it an upright head-gate?

A—No, sir; it was put in the top part of it, leaning to the south, probably at an angle of 45 degrees.

Q—Have you ever constructed any head-gates?

A—Yes, sir; that is my business to a considerable extent.

Q—When a head-gate is constructed in that form, leaning at an angle of 45 degrees, and upward to the south, in what direction is intended to control the flow of the water?

1488 A—It is to hold the pressure of the water from running against it. If the top is leaning to the south, the water is supposed to run to the south. The pressure of the water would be from the north side; that would be the natural direction of the water when it leaned that way; it would be to hold the pressure from the north side.

Q—Suppose the pressure of the water was coming from the south side; suppose in this instance, that the water instead of moving from the north towards Buena Vista Lake—suppose this head-gate had been put in there to prevent the water, or controlled the water from run-
1489 ning from Buena Vista Lake northward, what utility would it have for that purpose?

A—The rafters would have had to run the other way, or else be square—perpendicular before it would be safe. It might have controlled it, but it would not have been safe. The pressure of the water would have lifted it up.

Q—Would not the pressure of the water have washed the boards out?

A—Yes, sir; lifted it right up, of course.

Q—Have you ever known a head-gate constructed to control water running naturally from the south to the
1490 north, by having the top of the head-gate lean 45 degrees to the south?

A—No, sir. Any gate of that kind is usually put in straight.

Q—Did you ever cross the swamp land district?

A—Yes, sir; I have crossed it in 1877; the only time I was ever across the swamp land district, from bank to bank. I crossed it from west to east. That was in October, 1877.

Q—From what point of the west did you enter it?

A—It was a point south, or noth of Dover's Camp, probably 3 or 4 miles. I can't tell exactly how far down
1491 it was. I came across from the east from that point. I was not acquainted with the swamp land district at that time.

Q—How came you to take that course?

A—Well, there were three of us there; the Sheriff and another party and myself. And we stopped at Wible's Camp that night, and he showed us the way through. Instead of going away up around Cole's bridge, the way we went down.

Q—You mean Wible's Headquarter Camp?

A—No. sir; his headquarters at that time, not his

present headquarters camp; headquarters of construction down at the canal. He showed us a part of the way how he could cross, and went along with us. There was no water in the swamp at that time.

Q—I don't mean running water. Was there any water in the holes?

A—I didn't see any water in the holes. I didn't see any water at all.

Q—What did you find in crossing the swamp to the other side?

A—We found a kind of trail made through the tules; that was all.

Q—Did you cross any channels?

A—No, sir.

Q—Any slough?

A—No, sir.

Q—Anything that had the appearance of either?

A—No, sir; we just went right through the tules.

Q—What was the character of the country.

A—It was generally a level country right through the tule, all the way.

Cross-Examination of

WM. MCFARLAND.

Mr. HOUGHTON. Q—When you crossed the swamp at that time, you went across on the road that Mr. Wible lived on, did you not?

A—Yes, sir; It was not exactly a road. There might have been a team through there. I think, perhaps, there had been a wagon through there.

Q—It was where he drove across with his team, was it not?

A—Yes, sir. It was pretty thick with tules on each side. He had broken it down with a team. He showed us the way through.

Q—Where did you come out on the east side when you crossed?

A—Well, we got lost. I could not tell you where we first struck the high land. There was nothing there to designate it. We went on until we came to somebody's sheep camp, down somewhere near Delano, I think. We got lost on that trip going across.

1496 J. P. MURRAY,

Called as a witness for defendant, sworn, testified:

My name is J. P. Murray. Am over twenty-one years of age. I have been in the stock business since 1852. I have been in Mariposa county and Tulare county. I live in Tulare. I have been in the stock business, in what is now Kern County, from Tulare Lake south. My cattle ranged all over the island here, and around Kern and Buena Vista Lakes, and from Tulare Lake to those points. I brought cattle here first in 1864. It was a very dry
1497 year, the most part of it. It was a year of great drought. I came here from Tulare and brought cattle with me, somewhere in the neighborhood of a thousand or twelve hundred. I was with them. I bought those from a man who had them at the head of Tulare Lake and in the swamp—the south end of Tulare Lake, where Buena Vista Slough goes into it; between that and Goose Lake. The man I bought of had a camp on Tulare Lake, and turned the cattle south. which would make them range from there to Kern River; from there towards Goose Lake and still further south. I don't know how many
1498 cattle I did buy. I gave him $1,200 for his iron. The cattle were unusually cheap then. He claimed to have 1,500. I could not tell, because I did not see them. I think there were about 1,200. I think I had on the swamp between 2,000 and 2,500 head that year. I don't know how many cattle I had. They were ranging over the country during the year, but I would not have sold them for less than 2,500 head. I drove my cattle from Tulare county to the head of the lake, and then worked all the way up through the swamp south of Tulare Lake—Buena Vista swamp. I worked them clear through the country until I got near Old River sometimes. I came
1499 up on Old River. I was up all through the swamp that year. The water was down in the swamp that year. It was standing in holes. It was a very bad year. It was in April or May or June—along in those months; about three months that year. I was through there, backwards and forwards, looking for my cattle. Had to look for them. Some were not branded, and I branded them. I did not want to lose my calves; I wanted to get every one I could. I don't know what sections I went over that year. I don't think there was any section there that I did not go over. I don't know anything about sections.

1500 I saw no stakes there; nothing to mark the sections. I was not looking for stakes. I did not see any.

Q—How many cattle, except yours, ranged through that tule country.

A—There were a lot of cattle there. The country seemed to be full of them. I don't know how many. They drove them in from Santa Barbara and San Louis Obispo, and all over the country from Santa Clara. Santa Clara and Tulare, every place they had cattle they drove them in onto these tules and salt grass to save them, because it was a very dry year. That country all the way from Tulare Lake up to Buena Vista and Kern Lakes, and to
1501 Bakersfield, was full of cattle. Almost every man who had cattle in the country in any direction, drove them in there to save them. Dan Murphy had cattle there, Mr. Hawkins, Pat Murphy, from San Louis Obispo. I forget the names of the others now. Every man that had cattle in the country, had to drive them there to save them. I could not tell how many head of cattle were in there. I should think, perhaps, 35 or 40,000; probably more. Temple had a great many cattle there. I know Mr. Crocker but he was not in this country then. I think he was on the San Joaquin, up in that country some-
1502 where.

Q—When did you first see Mr. Crocker anywhere in this country that you have been speaking about—this swamp country here?

A—Well, sir, the first time I knew Mr. Crocker having any cattle in this country, say in 1869 or 1870. I met his men through here, and I knew his cattle. They were working down there in the swamp branding, on the west side and all the way through the whole country here. There were cattle in every place. I saw then, I think, the first year—the first year I met Crocker's men, I think it was on the east side of the swamp, down below Goose
1503 Lake, between there and what is called the Tule House. Mr. Crocker had cattle all over the country. I don't know that I saw them that particular season. I have seen his men all over Tulare County going up to Fort Tejon and Santa Maria, attending all the rodeos—Linn's Valley, Poso Creek, up Kern River—on Tule River and north of Tule River.

Q—During that year 1869, what other people, besides Mr. Crocker, had cattle through there—the country you have spoken of?

A—Well, evrybody had cattle there. In 1869 I was

1504 working all the way up from Tulare Lake towards Buena Vista Lake and Kern Lake, and upon the river, and during the year 1869. I was all over the country a great portion of the year; that was my business; I had nothing else to do; I was there in Spring, Summer and Fall. I saw no stakes there that year to mark the boundaries. I noticed lots of brands that year in the country. They were all through here, clear from King's River. Tom Fowler had cattle there from King's River. I don't know how many brands there were about there in 1869–70. There were a great many cattle near in the country. I
1505 think during the years 1869, '70 and '71 there were probably 40,000 or 50,000 cattle there, or more. Pat. Murphy had cattle there; Mr. Jones, I think; Crocker had cattle there; and Miller, and Cox and Clarke. I mean Henry Miller, or Lux & Miller, and Lynch and Fowler, and Blakenship, Bacon, and one or two or three of his boys. I don't know exactly how many I had there; I never counted them. In 1870 I think I could have sold my cattle for 2,500 cattle. They were probably worth $10 a head. That would make $25,000. I was there also 1871. That was a dry year. I worked all through there with my cattle in the Fall, Spring and Summer. I
1506 don't think there were any pumps down there on the country between Tulare and Buena Vista lakes in that year; I saw none there; if there had been any I should have seen them; I think I was all through there. 1869 was a pretty good year for cattle feed. In snch a year as that the swamp land is not worth much as feeding ground. In a good year we don't want our cattle run in the swamp. We drive the cattle there in bad years to save their lives. In a good year they would run out on the plains east and west and north and south wherever they could get alfileria. In good years we would not have the cattle in the swamp
1507 until late in the summer or fall. I think Mr. Crocker had a corral in Antelope Valley. He had a good many cattle in there. I have seen his cattle up that way. That is some fifteen miles west from the swamp land. Up through there there would be plenty of feed, except in dry years; plenty in good years. The cattle would range all over that country. I was a good deal through that swamp in the year 1871. In dry years I was there more than I was in good years, because my cattle did not run there much in good years. It was pretty dry along in 1871. I spent a good deal of my time there that year.

1508 In dry years you could get around better. Then, when there would be good feed, the cattle would run out on the plains; it was not neceessary to go into the swamp so much.

Q—How is it as to the amount of care that cattle require in a dry year, compared with a wet year?

A—You had to rush around there to find feed and water to save them. In 1871 I was driving cattle, picking them out of places where they were not doing very well, and driving them there, where they would do well; driving them up in this country, on the island. I think I was all over this swamp land district during that year.
1509 I had to go over it, to try and find my cattle. I didn't want to lose my calves. There were other cattle men in there, and I wanted to keep even with them.

Q—Are you acquainted with farming, Mr. Murray?

A—I am not much of a farmer. I raise a little grain and a little hay once in a while.

Q—Well, are you acquainted with the value of the land as farming land, whether good or not?

A—Well, yes, to some extent.

Q—Have you examined the land through that swamp sufficiently to pronounce whether it is good farming
1510 land?

A—Well, I would not pick it out for farming land. I don't think it would pay me to farm in this country.

Q—Why?

A—I don't think it wou'd produce anything that would pay a man. I don't think it would produce sufficient to pay a man to farm there. There is a good deal of alkali in that country—alkali knolls. I have seen the water get up inside of them, and it would bog my horse down. Some land is there better than others, of course. I have been all through that swamp.

Q—How is it as to the existence of any continuous
1511 channel through that swamp, from Wyble's headquarters to Tulare Lake?

A—Well, there is not much of a channel along there. There is some sloughs along there, but after you get down to where Wyble's camp is now, this Buena Vista Slough that comes down about there; a little below, if I recollect well; it spreads out all over the country.

Q—How is it as to a continuous slough along there; is there, or is there not?

A—I have never seen a continuoes slough through that country.

1512 CROSS-EXAMINATION.

By Mr. HOUGHTON. Q—Where have you been during the past month?

A—I have been on the island a few times. I have been stopping down there at the Bellview Ranch. I have known Haggin & Carr since 1877.

D. G. MCLEAN,

Called for defendant, sworn, testified:

1513 I reside 15 miles due west of Bakersfield, in this county.

Q—Have you been on that body of swamp and overflowed land south of Tulare Lake and north of what is called Wible's Head-quarters?

A—Yes, sir; I know where Wible's Head-quarters is. I was on that body of swamp land on the 15th, 16th and 17th of May, 1881.

Q—Whereabouts did you go up on those lands?

A—As near as I could follow it we went north to what was pointed out as the large Round Corral. I
1514 know where Goose Lake is. Round Corral is north of Goose Lake about 8 miles. This Round Corral is on the margin of the swamp lands. We started out from there on the morning of the 15th, and went about a mile or two miles north of the Round Corral, and attempted to cross into the slough, but we found water; we were very heavily loaded; we could not go any distance, and we had to return back to camp, and remained there until the morning of the 16th, Monday morning. On the next morning I was across the swamp land; on the morning of the 16th I was across it twice. On the morning of the 16th we came back south about a mile,
1515 I should judge, along the margin of the lake, and we went into the tules and found water, and had to turn out on the margin again. After going about a mile south from this Round Corral we found water, and we got out and waded across the slough, clear across, going as near west as I could; I mean by slough the water, the margin of the tules, the swamp; think we waded between three and four miles, nearly four miles, across there; I was on foot. I found the water from the high land to the high land, with the exception of a few high salt grass knolls; we passed over several spots of high ground. I mean, we found water, with the exception

1516 of these islands, from the high land on the east margin of the swamp to the high ground on the west margin of the swamp. I went completely across this body of swamp land; I don't think the water would average to exceed 6 or 8 inches in going across there. The deepest water was just to my knees. It was the deepest water there that I traveled through; perhaps two feet two inches. The widest knoll that we passed over, I think, was 250 yards.

Q—Did you see any channel at all in going through there?

A—I saw nothing of the sort; no appearance of a
1517 channel; nothing that I believe the most prejudiced or skeptical could construe as a channel. Had there been a channel I certainly should have seen it. It was tules all through there; tules all through. The greatest portion of it we had to part them out to pass through. We traveled out some distance on the west side, on the high ground. We didn't find the canal there. After getting out there we returned back to where the other parties were. In going back we went back in very nearly the same tracks. We did not at different places. Part of the way we went in the same tracks; part of
1518 the way kept on our course as near as we could. After getting out some distance we were fearful of not finding our way back, and we marked the way back as near as we could with landmarks, by breaking tules. On our return, after leaving that then, we deviated from our other route some distance, perhaps, and we got back to the east side of the swamp. I then insisted on the others going back to look at the ground I had been over. I returned with them and guided them through. We went back in a buggy. We went back over the same course, but only a portion of the way on the same route. In returning this time
1519 we saw no channels or slough. We saw none. We went across in a buggy. After reaching the west side with our buggies we returned back again to the same place we had left on the east side. Then we traveled up a few miles south and camped. Our camp was on the east side of the body of swamp land. The next day we followed up the margin of the slough opposite the place where there is a house on the west bank; that was pointed out as Dover's place. Then we crossed the slough again; crossed the swamp land.

Q—In using the word "slough," are you using it in the same sense that you did before?

1520 A—As I did before—as the swamp and that entire body of land right through. When we reached a point opposite Dover's, we were still on the high ground on the east side. We crossed no water, that I remember of, before we got to the point opposite Dover's. Then we traveled northwesterly. We then crossed the body of swamp land at the point from the east side to the west. We went completely across the body of swamp land to the canal on the west side. In going through we saw a flat body of tule land. No water. Crossed no water there.

Q—Did you see any slough or channel in going across
1521 there?

A—No, sir; nothing that we would recognize as a channel or slough.

Q—Well, was there any channel or slough in going through there?

A—There was not, that I could see. If there had been I should have seen it. It was a body of tule land; tules growing all through there. After getting across we went up to the bank of the canal. There was water in the canal. There was considerable water in it, but it was muddy, and I could give no idea of the depth of the water. It was from 50 to 60, or pos-
1522 sibly 80 feet wide, and flowing northward. After going to the bank of the canal we returned back to the east side again. We followed up the bank of the canal northward a distance, and then went back to the east side again. In returning to the east side we started in a short distance north of where we came out; didn't return on our former track. The country through there was very similar to what we had passed in coming. No slough or channel; no water whatever, tules growing the same way. I noticed the soil in going through there in a great many places. I
1523 found more alkali in that soil than I expected—a great deal. In some places I thought it was very heavy. We went back to the extreme easterly edge of the swamp land. Then we traveled southward along the margin of the swamp and tules for several miles opposite to the Bonestell place. After we came up several miles we met the water again. It was spread around over the country. You could not get in. We attempted to and it was too boggy, and we had to turn back to the margin of the swamp again, still on the east side. From opposite Bonestel's we turned east. We did not travel north at all, after we turned to go

1524 south, after returning, after finding the water near Bonestell's, and we traveled southward to what was known as the De Weber place, and then I returned home. I saw no water in going to the De Weber place. We drove out from the water margin and left the swamp entirely, and I didn't return after that. I know what is called Goose Lake Slough. I never saw water running in that slough but on one occasion. I have turned water into Goose Lake Slough at the bridge. I turned water into Goose Lake Slough; I think it was in the spring of 1878; I think it was that spring. I turned it in at one time and held it in for a
1525 month, for the benefit of the Kern Valley Water Company, or the Wible Canal, as we generally called it.

Q—How did you happen to do that, doctor?

The plaintiffs object to the question on the ground that it is irrelevant and immaterial.

Mr. GARBER—We have laid a foundation for this by asking Mr. Wible whether he made this request, and we submit that for other reasons it is admissible.

The objection is overruled, and plaintiffs except.

A—I did it at the request of Mr. Wible and Souther.

Mr. GARBER—I would like to call Mr. Wible a moment. If there is any question about laying the foun-
1526 dation, I want to lay it now.

S. W. WIBLE,

Recalled, testified :

Mr. GARBER—Did you, on the 6th day of May, or thereabouts, make that request of Dr. McLean, the witness on the stand ?

Objected to by plaintiff as irrelevant and immaterial.

Mr. GARBER—I want to ask that as laying the foun-
1527 dation for contradicting the testimony of Mr. Wible. If we were not explicit enough before, when we attempted to lay the foundation, we wish to make it explicit now. The request was made to Dr. McLean because he was superintendent of one of those ditches. That will appear in evidence, if it does not appear now. It will appear in evidence that this request was really made to the parties controlling these ditches, which are in evidence. Mr. Wible has been a witness for plaintiffs, and I wish to show this in order to argue that in connection with Wible's testimony.

Mr. MCALLISTER—Our objection is, that they have

1528 asked Mr. Wible a question upon a collateral point, and they are bound by his answer; they cannot contradict him upon a collateral matter. We say that the turning of this water into Goose Lake Slough is a matter entirely immaterial to the issues of this case.

Objection overruled. Plaintiffs except.

Mr. GARBER. Q—Did you make that paper? [Showing.]

A—Yes, sir.

Q—Did you send it to Dr. McLean's.

A—I suppose I did. It is addressed to him. It is dated May 1st, 1878.

1529 Mr. GARBER—I now offer it in evidence.

The paper is offered in evidence, and is as follows:

"Mr. D. G. McLean—Dear Sir: I send you a team to plough in Goose Lake channel. You can try it and see how it works. He can plough this afternoon and to-morrow forenoon, if that will do, and if it does well, can stay longer. You will please attend to it personally. The water will fall after to-day, as it is very cold this morning. We are all right; the canal is still not full, but it is hard on our banks.

"Respectfully, S. W. WIBLE.

1530 "May 6th, 1878.

"Water rose one inch last night."

D. G. McLean—[Continued.]

Q—Do you know the several branches of Kern River or New River, generally denominated the North Branch or North Channel, Middle Channel, and South Channel, or any of these, below Tracy's Crossing?

A—Yes, sir; I have been across them repeatedly for several years.

Q—During what years have you been across there?

A—I think I was across there in 1875, 1876, 1877

1231 and 1878, 1879 and 1880, nearly every year, I think, since I have been living down in that portion of the country. I have been at Cole's Bridge. I have seen water in these branches, and I have crossed them when they were dry, and at all stages of water, almost, when they were passable at all. I crossed them in 1875, I think; in the spring, I think. I found water in them very full. I crossed them somewhere near the east line of Section 21, I think it is. It was in Section 21, T. 30, R. 25, a little above—east of the Buena Vista Ranch. I started from there and went in a southeasterly direction.

1532 In going across there I crossed the North Channel. There was very little water in the North Channel. I had no difficulty in crossing it. The Middle Channell I crossed without much difficulty. The South Channel I crossed, it was very deep and had as I remember a very swift current. I had difficulty in crossing it. The current was very swift. It was almost swimming. At that time I think the bulk of the water was going in the extreme South Channel. That was in the spring of 1875. I crossed it again later in the season of 1875, at exactly the same place. There was much less water in all the channels. There was
1533 very little water in the North Channel. The Middle Channel had a shallow stream. The South Channel had a current, and was running through a more defined bank. I thought the South Channel carried the most water. I have crossed there when the Middle Channel and the North Channel were both dry, and there was water in the South Channel, and it was flowing with a considerable current. I think that was the same year at a later period. I passed there several times in subsequent years, when I found no water in any except the South Channel and at such times the water would be flowing in the South Channel. It flows in
1534 the South Channel in a southwesterly direction. It empties into the slough at the head of Buena Vista Lake.

Q—After reaching the slough, what is the course of the water, do you know, or what was it at the time you are speaking of. When did you first go down there to where it empties into Buena Vista Slough, or have you ever been there?

A—I was there first in 1874, but the water was very high in the lakes, and in all the country. That was in the latter part of November.

1535

J. P. Murray,

Recalled for defendants.

Mr. Garber. Q—I asked you about the year 1870 and 1871 on that swamp. I forgot to ask you how long you continued to keep your stock there.

A—Until 1877. I was along up there every year until that time.

Q—And did the same condition of affairs exist as existed before, as you have testified to?

A—In regard to cattle; yes, sir.

1536 CROSS-EXAMINATION.

Mr. HOUGHTON. Q—Are you in the cattle business now?

A—I have got some cattle; about one hundred. I now live on the Tule River in Tulare County. Probably more than 100. I have cattle running up here in the Greenhorn Mountains, on the Breckenridge Ridge. I think I have had a thousand cattle during the last 4 or 5 years up in those mountains, if I could get them out of there. They are a little wild.

To Mr. GARBER—I could have sold my cattle in 1877
1537 for ten thousand head. Mr. Lynch was my partner there then.

To Mr. HOUGHTON—Mr. Lynch and I had 10,000 cattle in 1877. Miller & Lux talked about buying them for 12,000 head. I owned half of them.

F. P. McCRAY,

Recalled for defendants.

Mr. FLOURNOY. Q—Are these the [showing] original sketches referred to in your previous examination?

A—Yes, sir. They represent such parts of the sur-
1538 vey of the Swamp Land District 121 as I made it in subdivisions in 1877 and 1878. Those are the original sketches produced in connection with my former examination. They are precisely as I then produced them. They have not been out of my possession to my knowledge. There is no change in them since then. There hasn't been no penciling of any kind put on them since then. They have been marked by the reporter Exhibits E and F. These are the papers that were photographed.

Q—Were there any sketches or notes in connection with these, or a part of them?

1539 A—No, sir.

Q—There were no other notes, or papers, or memoranda in connection with these at the time, I understand?

A—No, sir.

[The sketches are offered in evidence.]

[Here insert.]

D. G. McLEAN,

Recalled.

Mr. HAGGIN. Q—I was speaking to you about the waters in those various branches of Kern River, and

1540 was asking you about the course of the water after reaching Buena Vista Slough, and I think at that moment the Court took a recess. Will you give me your answer. These branches of New River, the south and middle branch? What is the course of that water after it reaches Buena Vista Slough?

A—It runs into Buena Vista Lake when there is an ordinary stream; when there is a very heavy stream of water, it overflows. It runs into Buena Vista Lake from the southerly branch.

Q—You say you have been at Cole's Bridge?

A—Yes, sir.

1541 Q—Did you ever see the dam there at Cole's Bridge?

A—Yes, sir; I have seen a levee clear across there. The first time I saw it was about the time it was completed, in 1877 or 1878. I understand the effect of that was, to turn the water from Buena Vista Lake, down through the swamp in the direction of Tulare Lake northward.

Q—When you said the water flowed into Buena Vista Lake, did you mean whether the dam was there or not?

A—No, sir; if the dam was gone. My answer did not mean when the dam was there. I saw it when there was no dam there. Then the water went towards the

1542 lakes. When the dam was there it had to go in the other direction.

Q—You mentioned a while ago having received a note from Mr. Wible relative to turning the water down Goose Lake; after receiving that note, what did you do?

A—I forced all of the water through the Pioneer and the different ditches that I possibly could to carry it down the channel of the river.

Q—What different ditches?

A—The Pioneer, the Goose Lake, the Dixon Rail-

1543 road, and the Wible ditches. By the Dixon Railroad I mean the Railroad ditch. I did that not in response to that note. It had been arranged prior to that that I should hold the water of the river from their works, and force it down the Goose Lake Slough, and also down the Pioneer ditch. There is a large head-gate in Goose Lake Slough. The name of that is the Goose Lake Canal. I have charge of that Goose Lake Canal. It belonged to Carr and Haggin. They were the men who told me to watch out for it. I was the Superintendent of the Pioneer at that time. I knew the Pioneer Canal in the spring of 1876, February and March.

1544 Its capacity was 40 feet on the bottom. I had nothing to do with turning the water into the Pioneer in the spring of 1876. I saw the water in it that spring. It was fully as much as it would carry, I should judge. The water turned in was distributed to the various land along its banks below. It was used for irrigation. I was the Superintendent of the Pioneer in the year 1879. We did not have abundance of water in that canal that year. The reason was, it was not in the river. That was a dry season, and there was not much water in the river, as I remember. I know the Calloway Canal. I don't know of my own knowl-
1545 edge whether there was any water in the Calloway in April or May, 1879, or not. I don't know whether the Calloway did anything to get water that year or not, further than I recollect some instructions that I had that year myself in the distribution of the water of my canal.

Q—What orders had you relative to the water of your canal in the spring of 1879?

The question is objected to by the plaintiffs on the ground that it is immaterial, incompetent and inadmissible.

Mr. HAGGIN—I propose to prove, in accordance with
1546 our pleading, that at certain times defendant had water by the license and permission of the other canal companies, which had valid prescriptive rights to the water of the river.

The objection is overruled and the plaintiffs except.

A—I had orders to economise the water in every way possible; that the water was scarce and they wished to let the Calloway have some water, that the settlers there had crops which were suffering and they would like us to let them have it, if it could possibly be arranged.

Q—Did you in the spring of 1879, as Superinten-
1547 dent in charge of the Pioneer Ditch allow the Calloway to take water from the Pioneer Ditch.

A—Well, I got through, and everybody got so they were not suffering, and I reported it.

Q—Did you allow the Calloway to have the water or not?

A—I did in the spring of 1879. It was about May, about the 1st of May, perhaps.

Q—Did you at that time, continue to have water after this permission to the Calloway, of allowing the water to be taken by the Calloway—did you continue to have water in your ditch?

1548 A—Yes, sir. A few days afterwards the river rose, and we had our usual head again.

Q—Before the raising of the river, did you continue to have water?

A—Yes, sir.

Q—You allowed the Calloway Canal to have it. Did that make any difference in the quantity of water you had?

A—It reduced our head somewhat.

CROSS-EXAMINATION.

1549 Mr. HOUGHTON. Q—You say you had orders relative to economising your water in the Pioneer, in the early part of 1879. Whom did you receive those orders from?

A—I received them directly from Col. McClung, I think, also from Mr. Carr and Dr. Thornton. I have been Superintendent of the Pioneer Canal since 1876, all of the time.

Q—Who does that canal belong to? Haggin and Carr?

A—They own the most of it.

1550 Q—You are employed are you not, as Superintendent of the Company?

A—Yes, sir.

Q—You say you were down on the swamp land at Buena Vista Slough, on the 15th, 16th, 17th and 18th of May, 1881?

A—That is my recollection of the dates.

Q—Was that the first trip that you had ever made down there?

A—That is the first trip that I ever was in that portion of the swamp. I went first to the Round Corral. We reached the corral shortly after dark on Saturday

1551 night, the 14th. Dr. Thornton, Colonel McClung and Redding, and Mr. Murray and Captain Taylor were there when I reached there. We all remained there that night together. The next morning we went in a northerly direction, I should judge, from the corral, and attempted to go into the swamp, five of us. They were Col. McClung, Capt. Taylor, Mr. Murray and myself. Dr. Thornton had gone, I suppose, to the ranch in Poso Creek. He was not with us. We had only one team and the five of us went in it. In going to the Round Corral we had three teams. When we attempted to go into the swamp the first day we went

1552 in one. Dr. Thornton was absent with one team and one of the horses of the other was dead. I don't know what caused the death of the horse. It died near Round Corral. We went a mile or two miles in a northerly direction and then turned westerly towards the swamp land. In going that mile or two miles northwest we kept along the margin of the swamp land. I could hardly give you an idea as to how far we drove into the swamp land. After we turned west we found water, and it was boggy, and our team was small and very heavily loaded, and we made several attempts to go in, but we had mules, and they went
1553 down and we floundered around there some time trying to get out. I don't know how deep we did go into the water. The mules were down to their bodies in mud and water together. We generally let them shuffle around and got back to the hard land as quick as we could.

Q—How deep did you get into the water where it was boggy?

A—I was in the hind end of the wagon and did not get into the water at all. The mules where they were were in the mud and water up to their bodies. In different places we went in more than the length of the
1554 mules and the buggy. We found no place where the water alone was up to the bodies of the mules. I don't think we found water at any distance exceeding two feet deep. We then went back to the Round Corral and drove about a mile south of it, and the next day Mr. Redding and myself walked across the swamp land in as near a westerly direction as we could travel. We were alone on that trip.

Q—How did you keep together in going that trip?

A—One walked directly behind the other. We were very close together.

Q—When you got to the opposite side how far out
1555 on the highland did you go?

A—I should judge we went out two or three hundred yards. I went out to look for the levee. I could see one building to the north of us and there seemed to be one to the south. I could hardly give an idea how far the one was to the north of us. It was one, or two, or three miles away. To make a guess I should think it was two or three miles. The one to the north was not so far as the one to the south of us.

Q—You say, I understand you, that in your trip across there you took all the distance as near a due west course as you could?

1556 A—As nearly a due west course as we could.

Q—Follow each other's tracks?

A—Yes, sir.

Q—You didn't change from that course on the trip?

A—No, sir; we made our course right across it.

Q—When you got across on to the high land at that point, where did you start in to return?

A—When we returned—we returned, I should judge—it was exactly in our same route.

Q—You started right in where you came out to return?

A—Yes.

1557 Q—Did you travel due east then in the same track?

A—In the same track in the tules, half way.

Q—Then having gone half way in that track, what course did you take?

A—We had followed up to that point in our former trip without making any land-marks or breaking the tules, and we made then our course the best way we could to about the point where we left our buggies, near the levees. We came out almost directly where we left the buggies, and about a mile south of the Round Corral. I then returned across the tules or swamp land with the other members of the party.

1558 When we started on this trip I went in the buggy with Dr. Thornton. There was a buggy went along. Col. McClung and Mr. Murphy were in that buggy. On that trip, for the first half mile, we didn't follow the trail we had made through. We did, as near as I could pilot, back. The latter part we found our trail and followed it, varying from it very little.

Q—Then the last part of the course after you struck it was going due west, or as near due west as you could go?

A—The whole line was as near a due west line, as straight as we could make it.

1559 Q—Then after striking that trail half way across you continued in one course to the high lands?

A—I think, with one exception going over and one crossing back. At one time we lost our road going back, and we changed, to avoid a very soft place that we found.

Q—In going through to the west did you come out at the very point you had walked through?

A—In going to the west. After getting on the west side we drove out to the high land. On our return we started in again about the same point where we had

1560 come out, and went east again, and followed our wagon trail the first half of the way in very near the same track; a part of it in exactly the same track.

Q—The first part of it you followed in the same track on the west side?

A—As near as we could, varying it once to avoid some soft ground that we got in when we went through first.

Q—Where was that soft ground you turned out to avoid?

A—It is impossible to tell you. It was in the middle of thick, heavy tules. It was about the centre of
1561 the tule land. After getting half way across we didn't change our direction; we kept on nearly the same course until we got to the west side, where we had left. After getting back again we drove along the margin of the swamp land some miles, and camped; we drove some four miles—3, or 4, or 5, or six miles. The next morning we continued on along the swamp in a southerly direction to a point nearly opposite Dover's house, a little northeast of Dover's. In making that drive in the morning we passed through a fence. I didn't see the end of it either way. We were very near the tule land when we passed through that fence. We saw
1562 water repeatedly in driving along that morning. It was spread out. I saw some lakes.

Q—Did you see a channel between those lakes?

A—I did not; no, sir. I saw a lake, but I saw nothing. It was perfectly solid with tules and water extending for a distance out, but nothing that would indicate a channel. I could not tell how many lakes I saw during that ride, but I saw but two with water in them. We drove right along close to the margin of the swamp land, and I could see the water, and sometimes we would get too close on account of the water and we would bear out again. After passing that fence we
1563 drove to a point south and east of Dover's; I could not tell how far. I could not tell whether it was 5, 10, or 20 miles, but I think it was several miles. We left our camp when the sun was half an hour or an hour high, and we turned across the swamp towards the west before 12 o'clock. We traveled along the margin of the swamp a portion of the time.

Q—When you were at Round Corral, did you try to cross the swamp right in front of it, going due west?

A—No, sir.

Q—Did you see any one try to cross it there?

1564 A—No, sir; I saw no one drive out into the swamp land at that point.

Q—Did you go to the slough right in front of Round Corral?

A—We got water there.

Q—Did you cross the slough?

A—We did not.

Q—How wide was it?

A—You could not call it a slough really. At one place it was very narrow, and then again it was wide. It was all in the tules where I went to it. I don't know how far directly opposite to me it did go, be-
1565 cause it went right out into a flat place, and the tules were high, so that I could not see. It was 20 feet wide from where I stood on the bank to the tules.

Q—How wide was it at the widest place you saw it in front of the Round Corral? You say it was of different widths there?

A—I didn't notice anything hardly, to give an idea. I can't tell within ten feet. I should think there were some places where it was 10 or 12 feet wide, and other places where it was 50 to 100 feet. It was straight back into the tules.

Q—How much water was running in that slough or
1566 channel?

A—I can't say positively that it was running.

Q—You don't know whether it was running or not?

A—Yes, sir.

Q—You were down to it?

A—I was down to the edge of it and took some water.

Q—You don't know whether there was a current or not?

A—There was not enough current to carry off the mud where I took my water. I didn't notice whether there was any current there.

Q—How deep was the water?

1567 A—We had to go out several feet to get a place to dip water. When we crossed at a point nearly opposite Dover's, we went west and south from where we were, I would say. I had no way of knowing. We crossed over above Dover's house, perhaps half a mile north of Dover's house. We took nearly a straight course. I believe the entire party of six men and three teams went across on that trip. Only two teams went across at the other point. The six parties were Captain Taylor and Mr. Redding, Doctor Thornton and myself, Mr. Murray and Mr. McClung.

1568 Q—When you started to return after crossing to Dover's, where did you start in; the same point you came out?

A—We travelled down the canal a short distance, and then went right through in somewhere near the same direction. In returning we started in perhaps north a quarter or half a mile from where we came out, and we went something near an easterly direction, or northeasterly direction.

Q—Did you cross your former trail in returning?

A—No, sir. I think perhaps we came out nearly the same place where we started in. Our track was
1569 to the north returning of where it was going over, and we reached the point where we started from. In crossing back, we kept a little north of the trail we made going west. I should judge at times we were a quarter of a mile, perhaps more. After leaving there, then we travelled south and east along the margin of the swamp land. I don't think that we really stopped only temporarily at any point.

Q—Did you make any other crossing on the swamp land, on that trip?

A—We made one crossing.

Q—Did you make any other attempt to cross on that
1570 trip?

A—We attempted to drive in.

Q—Where.

A—I believe it is at the upper, or south end of what was called Broder Island.

Q—How far did you drive in there?

A—I think we drove in but a short distance. It was very boggy.

Q—How far was it to where you struck the first water?

A—I think we went nearly a quarter or half amile in there and turned and went out again into the margin.
1571 We found it was getting worse all the time, and then we drove north and east until we hit the margin of the swamp land again. I never went back again. I am a farmer and stock-raiser, and have charge of the Pioneer Canal as superintendent. I have been a stock-raiser eight years; farming exclusively for five or six years. I have been practicing medicine some and farmed before. I am not a graduate of any medical college.

1572 RE-DIRECT EXAMINATION.

Mr. HAGGIN. Q—In crossing back from this point north of Dover's, are you positive that you kept to the north of the track that you had made in going from the east side before?

A—In going over, starting from the extreme margin of what would be the swamp land in the east, we started and went through, and when we went back, as we came back we traveled north, and then came back and worked across our former track, perhaps two-thirds of the way of what would be, properly considered, the
1573 swamp land; and then after we had made the crossing we traveled in a south and easterly direction. In going back we crossed our former track; we made a bend. The wagons were scattered a little distance apart; we drove in and some one made a signal, I don't remember who, and we all came together at the signal, and we went to the point of the most westerly wagon. From that point, then, we started and went across, traveling west, and perhaps a little south; then we traveled north, and started back across and intercepted this point somewhere near where we had rendezvoused to make our first trip across; then we crossed it from that
1574 point; we had been coming from a northerly direction, traveling south; then, when we came to the point where we had rendezvoused, to start from, we traveled in a southeasterly direction, really making across about two-thirds of the way, perhaps. The heaviest of the swamp and the tules were to our left.

Q—In making your first crossing with Mr. Reading, on foot, do you mean that you and Mr. Reading followed right in one another's tracks, all of the way completely across?

A—Going across the first time we followed almost in each other's tracks.

1575 Q—Right in the western margin of the swamp?

A—No, sir. Just before we crossed the swamp Mr. Redding had given out, and then I parted from him and went clean across. Mr. Redding gave out just before we got to the west side almost entirely, and then I went across and prospected clear through, and went out on the high land. When I came back and reported to him, and he had rested then, and then he went back and went through, and I went with him part of the way, and got to the margin of the tules and stopped, and he walked

1576 out on the plains, to satisfy himself thoroughly that there was no water beyond.

Q—So that, before going out of the swamp, you parted for a time?

A—Yes, sir; we separated for a time. The Pioneer Canal belongs to different individuals. It belongs to the Pioneer Canal Company.

Q—What do you mean by saying that Haggin & Carr own the most of the canal?

A—They are the principal stockholders of the canal; they are the principal stockholders. Colonel McClung is the President of the Pioneer Canal Company, and he was
1577 the President during 1879, the time I am speaking of.

Re-cross-examination of

D. G. McLean.

Mr. McClung, whom I speak of, has charge of one of Mr. Haggin's ranches.

Q—When Mr. Redding gave out on this trip across there how far was he from the west margin of the swamp land?

A—To make a rough guess, I would guess two or three
1578 hundred yards. After he gave out I continued right through to the west, and when I went back to him I went back the same way I came.

Q—Then going back to get him, did you go through with him again?

A—I went with him again to the edge of the high land, and told him I would rest and he would go ahead.

Q—After you walked to the edge of the high land, had you crossed all of the water?

A—I had crossed all of the water both times.

Mr. Haggin—I now offer in evidence the articles of
1579 incorporation of the Kern River Land and Canal Co., filed June 21st, 1876.

The articles of incorporation are read in evidence, and are as follows:

"Articles of Incorporation of the Kern River Land and
"Canal Company.

"Know all men by these presents, that we, the un-
"dersigned, have this day associated ourselves together
"for the purpose of incorporating under the laws of the

1580 " State of California, a corporation to be known by the
" corporate name of " The Kern River Land and Canal
" Company."

" And we hereby certify that the purposes for which
" this corporation is formed are: To construct a canal one
" hundred feet wide, more or less, and four feet deep,
" from a point on Kern River, near the railroad bridge,
" Kern County, California, extending thence to Tulare
" Lake, for irrigating, manufacturing, commercial and
" mining purposes; to buy and sell, lease, or otherwise
" acquire lands, and manage the same; to raise, buy and
" sell live stock, and generally to engage in every branch
1581 " of business pertaining to canals, agricultural, timber,
" mineral or grazing lands.

" That its principal place of business shall be in San
" Francisco, California.

" That the time of its existence shall be fifty years,
" from and after the date of its incorporation.

" That the number of its directors or trustees shall be
" seven, and that the names and residences of those who
" shall serve until the election of such officers and their
" qualifications are:

Names.	Residences.
1582 " W. H. Baxter	San Francisco, Cal.
" William Holden	" "
" J. P. Moore	" "
" O. P. Calloway	" "
" J. A. Robinson	" "
" Chas. F. Brown	" "
" E. W. Scott	" "

" That the capital stock of this corporation shall be
" five hundred thousand dollars, divided into five thou-
" sand shares of the par value of one hundred dollars
" each.

1583 " In witness whereof, we have hereunto set our hands
" and seals, this eleventh day of May. A. D. 1875.

" W. H. BAXTER, [SEAL.]
" WILLIAM HOLDEN, [SEAL.]
" J. P. Moore, [SEAL.]
" O. P. CALLOWAY, [SEAL.]
" J. A. ROBINSON, [SEAL.]
" CHAS. F. BROWN, [SEAL.]
" E. W. SCOTT. [SEAL.]

" Signed and sealed in presence of

1584 " STATE OF CALIFORNIA, }
" City and County of San Francisco. } ss.

" On this eleventh day of May, A. D. eighteen hundred " and seventy-five, before me, E. H. Tharp. a notary " public in and for the said city and county, personally " appeared W. H. Baxter, William Holden, J. P. Moore, " O. P. Calloway, J. A. Robinson, Chas. F. Brown and E. " W. Scott, known to me to be the persons whose names " are subscribed to the within instrument, and they sev- " erally acknowledge to me that they executed the same.

" In witness whereof, I have hereunto set my
1585 " hand and affixed my official seal, the day and year in " this certificate first above written.

[SEAL.] " E. H. THARP,
" Notary Public.

" Office of the County Clerk of the City and County of " San Francisco.

" I, Thos. H. Reynolds, County Clerk of the City and " County of San Francisco, State of California, and Clerk " of the County Court thereof, do hereby certify the fore- " going to be a full, true and correct copy of the articles
1586 " of incorporation of the Kern River Land and Canal " Company, filed in my office on the 18th day of May, " A. D. 1875.

" Witness my hand and the seal of said Court this " 19th day of June, A. D. 1876.

" THOS. H. REYNOLDS, County Clerk.
" By JOHN H. HARNEY, Deputy Clerk.

" (Endorsed): Articles of Incorporation of the Kern " River Land and Canal Company. Certified copy. " Filed June 21, 1876.

" F. W. CRAIG, Clerk."

This is taken from the files here. I suppose that is
1587 admitted.

" Mr. HAGGIN. The next paper I offer in evidence is " this (showing):

Mr. HOUGHTON. This is a paper which we have offered in evidence before.

Mr. HAGGIN. This begins, " State of California, De- " partment of State,." It is a certificate from the office " of the Secretary of State.

" State of California, Department of State, I, Thomas " Beck, Secretary of State of the State of California, do " hereby certify that I have compared the annexed copy

1588 " of the original articles of Incorporation of the Kern
" River Land and Canal Company with the certified copy
" of original now on file in my office, and that the same
" is a correct transcript therefrom and of the whole
" thereof.

" Witness my hand and the great seal of State, at office
" in Sacramento, this 26th day of March, A. D. 1879.

" [SEAL.] THOMAS BECK,
" Secretary of State,
" By WM. A. BECK,
" Deputy."

And attached to that are these words:

1589 " Articles of Incorporation of the Kern River Land
" and Canal Company.

" Know all men by these presents, that we, the under-
" signed, have this day associated ourselves together for
" the purpose of incorporating under the laws of the
" State of California, a corporation to be known by the
" corporate name of the Kern River Land and Canal
" Company. And we hereby certify that the purposes
" for which this corporation is formed, are: to construct a
" canal one hundred feet wide, more or less, and four feet
" deep, from a point on Kern River, near the railroad
1590 " bridge, Kern County, California, extending thence to
" Tulare Lake, for irrigating, manufacturing, commercial
" and mining purposes; to buy and sell, lease or otherwise
" acquire lands, and manage the same, to raise, buy and
" sell live stock and generally to engage in every branch
" of business pertaining to canals, agricultural, timber,
" mineral or grazing lands; that its principal place of
" business shall be in San Francisco, California; that the
" time of its existence shall be fifty years from and after
" the date of its Incorporation; that the number of its
" Directors or Trustees shall be seven, and that the
" names and residences of those who shall serve until the
1591 " election of such officers, and their qualifications, are:

Names.	Residences.
" W. H. Baxter	San Francisco, Cal.
" Wm. Holden	" "
" J. P. Moore	" "
" O. P. Calloway	" "
" J. A. Robinson	" "
" Chas. F. Brown	" "
" E. W. Scott	" "

" That the capital stock of this corporation shall be

1592 " five hundred thousand dollars, divided into five thous-
" and shares of the par value of one hundred dollars
each."

" In witness whereof we have hereunto set our hands
" and seals this 11th day of May, A. D. 1875.

" W. H. BAXTER. [SEAL.]
" WILLIAM HOLDEN. [SEAL.]
" J. P. MOORE. [SEAL.]
" O. P. CALLOWAY. [SEAL.]
" J. A. ROBINSON. [SEAL.]
" CHAS. F. BROWN. [SEAL.]
1593 " E. W. SCOTT. [SEAL.]

" Signed and sealed in the presence of

" STATE OF CALIFORNIA, }
" City and County of San Francisco. } SS.

" On this 11th day of May, A. D. 1875, before me, E.
" H. Tharp, a notary public, in and for the said city and
" county, personally appeared, W. H. Baxter, William
" Holden, J. P. Moore, O. P. Calloway, J. A. Robinson,
" Charles F. Brown, and E. W. Scott, known to me to be
1594 " the persons whose names are subscribed to the within in-
" strument, and they severally acknowledge to me that
" they executed the same.

" In witness whereof I have hereunto set my hand and
" affixed my official seal the day and year in this certifi-
" cate first above written.

" [SEAL.] E. H. THARP,
" Notary Public.

" Office of the County Clerk of the City and County of
" of San Francisco.

" I, William Harney, County Clerk of the City and
" County of San Francisco, State of California, and clerk
1595 " of the County Court thereof, do hereby certify the fore-
" going to be a full, true and correct copy of the Articles
" of Incorporation of the Kern River Land and Canal
" Company, filed in my office on the 18th day of May, A.
" D. 1875.

" Witness my hand and the seal of said Court, this
" 18th day of May, A. D. 1875

" WM. HARNEY.
County Clerk.

" [SEAL.] By JOHN H. HARNEY,
Deputy Clerk.

1596 Endorsed: "No. 4919, Articles of Incorporation of "the Kern River Land and Canal Company.

"Filed in the office of the Secretary of State, the 19th "day of May, 1875.

"DRURY MALONE,

"Secretary of State.

"By N. E. WHITE,

"Deputy.

"Recorded in Book 13, Page 82. (Also Endorsed.)

"Filed: March 28, 1879.

"N. R. PACKARD,

"Deputy County Clerk, Kern County."

1597 This is also from the files of the office here:

Defendants now offer in evidence a deed, dated 18th day of May, 1875, made by the parties whose names were signed to the notice of appropriation of water in connection with the Calloway to the defendant, the Kern River Land and Canal Company. It is objected to by the plaintiffs, on the ground that it is irrelevant and immaterial. The objection is overruled, and the plaintiffs except.

The deed was then read in evidence, and is in the words and figures following, to wit:

1598 "Know all men by these presents that for and in con- "sideration of one dollar, to us in hand paid, and other "valuable consideration, the receipt of which is acknowl- "edged, we have granted, bargained and sold, and by "these presents do grant, bargain and sell unto the Kern "River Land and Canal Company, a corporation doing "business in San Francisco, California, all our right, title "and interest of, in, and to all that certain water right, "privilege or claim to the water flowing in Kern River, "Kern County, California, situated, lying and being in "said Kern County, and more particularly described in "two notices posted on said Kern River, in said county,

1599 "on the fourth day of May, 1875, whereby is claimed "in the words and figures following, to-wit:

"'The water flowing in Kern River, Kern County, "State of California, to the extent of seventy-four thou- "sand inches, measured under a four-inch pressure, for "irrigating, manufacturing, commercial and mining pur- "poses, for use along the route of the ditch or canal here- "inafter described, said amount of water to be diverted "from said Kern River at two certain points, to wit:

"Point first, at a place on the right bank of said river, "about three hundred feet above the Southern Pacific

1600 " Railroad bridge, on said river, at the mouth of the
" slough known as the McCaffrey Slough, in Sec. 13, T.
" 29 S., R. 27 E., M. D. B. and M., which said slough and
" all the waters flowing therein, is and are hereby claimed
" by the undersigned, for the purpose of conveying said
" seventy-four thousand inches of water, and claim the
" privilege of deepening, enlarging and otherwise im-
" proving the same for that purpose, in manner and
" form hereinafter set forth.

" Point second: At a point on the right bank of
" said Kern River one hundred and fifty feet below
" said Southern Pacific Railroad bridge, to be taken
1601 " out in a ditch sixty feet wide and four feet deep and
" about two hundred yards long, to convey water
" in and to the said first described slough, as a part
" and parcel of the canal or ditch hereinafter described.
" Said water to be conveyed in a main ditch or canal in
" the said described McCaffrey Slough, said slough to be
" enlarged, deepened and widened for that purpose one
" hundred and twenty-feet on the bottom and four feet
" deep, with a slope of one to one, commencing at the
" point where the waters appropriated unite in said
" slough, about six hundred feet south and west of the
1602 " said Southern Pacific Railroad bridge, running thence
" in the bed of said slouugh, so enlarged and improved,
" in a south and west course into Sec. 22, T. 29 S., R. 27
" E., M. D. B. and M., to a point on said slough near a bluff
" at a willow tree on the right bank of said slough, marked
" with a blaze facing the slough, bench mark on said
" tree being 4 45-100 feet above surface of water in said
" slough, a distance of two miles and a half, more or less;
" thence in a ditch or canal one hundred feet wide and
" four feet deep, with a slope of one to one, in a south-
" westerly course, two miles and a half; thence in a
" northwesterly course, to and into Tulare Lake, thirty
1603 " miles, more or less;' and which will more fully appear
" from said notices, reference thereunto being had, copies
" of which notices were duly recorded in the office of the
" County Recorder of Kern County aforesaid, on said
" fourth day of May, 1875, in Book Volume One, of
" Water Rights, pages 37, 38 and 39, Kern Connty
" Records, as will more fully appear from said records,
" reference thereunto being had.

" Together with all and singular the tenements, hereditа-
" ments and appurtenances thereunto belonging or in any
" wise appertaining.

1604 "To have and to hold all and singular the above men-
" tioned and described premises, together with the ap-
" purtenances, unto the said Kern River Land and Canal
" Company, its successors and assigns forever.

" In witness whereof, we have hereunto set our hands
" and seals, this eighteenth day of May, 1875.

" W. H. BAXTER, [SEAL.]
" J. P. MOORE, [SEAL.]
" CHAS. F. BROWN, [SEAL.]
" S. N. PUTNAM, [SEAL.]
" ISAAC UPHAM, [SEAL.]
" WILLIAM HOLDEN, [SEAL.]
1605 " JAMES T. ISH, [SEAL.]
" L. L. BAKER, [SEAL.]
" E. W. SCOTT, [SEAL.]
" J. A. ROBINSON, [SEAL.]
" J. H. WILDES, [SEAL.]
" O. P. CALLAWAY, [SEAL.]
" W. WILKINSON, [SEAL.]
" JOHN L. COBLEIGH, [SLAL.]
" A. J. HAIGHT, [SEAL.]
" JOHN BURCHAM, [SEAL.]

1606 " STATE OF CALIFORNIA, }
" City and County of San Francisco. } ss.

" On this eleventh day of June, A. D. one thousand
" eight hundred and seventy-five, before me Eugene H.
" Tharp, a notary public in and for said city and county,
" residing therein, duly commissioned and sworn, person-
" ally appeared W. H. Baxter, Justin P. Moore, Charles
" F. Brown, S. N. Putnam, Isaac Upham, William Holden,
" James T. Ish, L. L. Baker. E. W. Scott, J. A. Robinson,
" J. H. Wilde, O. P. Callaway, W. Wilkinson, I L. Cob-
" leigh, A. J. Haight and John Burcham, severally
1607 " known to me to be the persons whose names are sub-
" scribed to the foregoing instrument, and they severally,
" each for himself, duly acknowledge to me that they ex-
" ecuted the same.

" In witness whereof, I have hereunto set my hand and
" affixed my official seal, the day and year in this cer-
" tificate first above written.

[NOTARIAL SEAL.] " E. H. THARP,
" Notary Public.

[Endorsed]. " Deed.
" W H. Baxter O. P. Callaway and others to the Kern

" River Land and Canal Company. Dated May 18th,
" 1875. Recorded at request of Wells, Fargo & Co., June
" 14th, A. D. 1875, at fifteen minutes past 9 o'clock A. M.,
" Book Volume 4, of Deeds, pages 321, 322, 323.
[RECORDER'S SEAL.] " F. W. CRAIG, Recorder.
" Recorder's fee, $6."

Defendants offer in evidence a deed from J. B. Haggin to the defendant, the Kern River Land and Canal Company, dated the 16th day of June, 1880. It is objected to by the plaintiffs on the ground that it is irrelevant and inadmissible, and on the fnrther ground that it does not apper that the grantor had any title at the time he made the deed.

Mr. HAGGIN—We propose to prove that.

The objection is overruled, and the plaintiffs except.

The deed was then read in evidence, and is in the words and figures following, to-wit:

" This indenture, made the sixteenth (16th) day of
" June, in the year of our Lord one thousand eight hun-
" dred and eighty, between J. B. Haggin, of the City and
" County of San Francisco, the party of the first part,
" and the Kern River Land and Canal Company, a cor-
" poration duly organized and incorporated under the
" laws of the State of California, the party of the second
" part, witnesseth, that the said party of the first part,
" for, and in consideration of the sum of five dollars, of
" the United States of America, to him in hand paid, by
" the said party of the second part, the receipt whereof
" is hereby acknowledged, has remised, released and for-
" ever quit claimed, and by these presents does remise,
" release and forever quit claim unto the said party of the
" second part, and to its successors, and assigns all the
" north half and southwest quarter of the northwest
" quarter, [N. half and S. W. quarter of N. W. quar-
" ter] of Section twenty-four (24), Township twenty-nine
" (29), South Range twenty-seven (27) East, Mount
" Diablo base and meridian containing one hundred and
" twenty (120) acres more or less; together with all
" and singular, the tenement, hereditaments, and apur-
" tenances thereunto belonging, or in any wise appertain-
" ing, and reversion and reversions, remainder and remain-
" ders, rents, issues and profits thereof, and also all the
" estate, right, title interest, property, possession,
" claim and demand whatsoever, as well in law as in
" equity, of the said party of the first part. of, in, or to
" the said premises, and every part and parcel thereof,

1612 " with the appurtenances; to have and to hold, all and " singular the said premises, together with the appurten- " ances, unto the said party of the second part, and to its " successors and assigns forever.

" In witness whereof, the said party of the first part " has hereunto set his hand and seal the day and year " first above written.

[SEAL.] " J. B. HAGGIN.

" Signed, sealed and delivered in the presence of J. K. " Goodrich.

" STATE OF CALIFORNIA, }
" City and County of San Francisco. } ss.

1613

" On the sixteenth day of June, A. D. one thousand " eight hundred and eighty, before me, E. V. Joice, a " notary public, personally appeared, J. B. Haggin, known " to me to be the person whose name is subscribed to the " within instrument, and he acknowledged to me that he " executed the same.

" In witness whereof I have hereunto set my hand and " affixed my official seal, at my office, in the City and " County of San Francisco, the day and year in this cer- " tificate first above written. E. V. JOICE,

" Notary Public.

1614 [NOTARIAL SEAL.]

SATURDAY, May 28, 1881.

Defendants offered and read in evidence the original certificate of incorporation of the defendants, the Kern River Land and Canal Company. Said certificate of incorporation is marked defendants' Exhibit S, and is in the words and figures following, to-wit:

STATE OF CALIFORNIA, DEPARTMENT OF STATE, }
SACRAMENTO, May 19, 1875. }

1615 I, Drury Melone, Secretary of State of the State of California, do hereby certify that a copy of articles of incorporation was filed in this office on the nineteenth day of May, A. D. 1875, containing the following statement of facts:

1. That the name of the corporation is the Kern River Land and Canal Company.

2. That the purpose for which it is formed is to construct a canal from a point on Kern River, near the railroad bridge in Kern County, to Tulare Lake, for ir-

1616 rigating and other purposes; to acquire and sell lands; and to raise, buy and sell live stock.

3. That its principal place of business is San Francisco, Cal.

4. That the term for which it is to exist is fifty (50) years.

5. That the number of its Directors or Trustees is seven (7), and the names and residences of those who are to act as Directors or Trustees until the election of such officers and their qualification are:

Names.	Residences.
1617 W. H. Baxter	San Francisco.
William Holden	San Francisco.
J. P. Moore	San Francisco.
O. P. Calloway	San Francisco.
J. A. Robinson	San Francisco.
Charles F. Brown	San Francisco.
E. W. Scott	San Francisco.

6. That the amount of its capital stock is five hundred thousand dollars ($500,000), and the number of shares into which it is divided is five thousand (5,000).

Witness my hand and the Great Seal of State, at my office in Sacramento, California, the nineteenth day of
1618 May, A. D. 1875.

DRURY MELONE,
Secretary of State,
By N. E. WHITE, Deputy.

[The Great Seal of the State of California.]

Defendant offers in evidence the articles of incorporation of the Kern Valley Water Company, filed in the office of the County Clerk of Kern County, May 24, 1877.

Objected to by the plaintiffs on the ground that it is irrelevant and immaterial and inadmissible.

1619 The objection is overruled.

Plaintiffs except.

Said articles of incorporation are read in evidence, and are in the words and figures following, to wit:

ARTICLES OF INCORPORATION OF THE KERN VALLEY WATER COMPANY.

Know all men by these presents that we, the undersigned, have this day voluntarily associated ourselves together for the purpose of forming a corporation under

the laws of the State of California, and we hereby certify:

First. That the name of said corporation is the Kern Valley Water Company.

Second. That the purposes for which it is formed are to acquire by purchase, or lease, or otherwise, water rights and canals in Kern and other counties in the State of California, to be used or disposed of for irrigation, transportation, domestic, mechanical, and other beneficial purposes; to construct and maintain canals and all necessary and proper works in connection with such canals; also, to acquire, by purchase and otherwise, lands for rights of way and reservoirs for such canal or canals.

Third. That the place where its principal business is to be transacted shall be Bakersfield, in said Kern County.

Fourth. That the term for which it is to exist is fifty years from and after the date of its incorporation.

Fifth. That the number of its Directors or Trustees shall be five, and that the names and residences of those who are appointed for the first year are:

Names.	Residences.
John H. Redington	San Francisco, Cal.
Chas. Lux	San Francisco, "
L. H. Bonestell	San Francisco, "
Horatio P. Livermore	Oakland, "
J. C. Crocker	Kern County "

Sixth. That the amount of the capital stock of this corporation shall be six hundred and fifty thousand dollars, divided into sixty-five thousand shares, of the par value of ten dollars each.

Seventh. That the amount of said capital stock which has been actually subscribed is five hundred and sixty-five thousand eight hundred and eighty dollars, and the following are the names of the persons by whom the same has been subscribed, to-wit:

Names of subscribers.	No. of shares.	Amount.
John H. Redington	38,811	$388,110
Horatio P. Livermore	373	3,730
Miller, Lux & Crocker	14,204	142,040
L. H. Bonestell	1,920	19,200
Horatio Stebbins	1,280	12,800

In witness whereof we have hereunto set our hands and seals, this twenty-second day of May, A. D. ~~1880.~~ 1877.

1624 Signed and sealed in presence of R. E. Houghton.

JOHN H. REDINGTON,	[SEAL.]
HORATIO P. LIVERMORE,	[SEAL.]
CHAS. LUX,	[SEAL.]
L. H. BONESTELL,	[SEAL.]
J. C. CROCKER,	[SEAL.]

Mr. HAGGIN—It is duly acknowledged, I presume?
Mr. HOUGHTON—It is duly acknowledged.
Mr. HAGGIN—Duly acknowledged and endorsed:
"Articles of Incorporation of the Kern Valley Water
1625 "Company; filed in the office of the County Clerk of
"Kern County, May 24th, 1877.

"F. W. CRAIG,
"Clerk.

"The paper is marked for identification by the Re-
"porter, J. W. G."

CHARLES D. GIBBS,

Being recalled for defendants, testified as follows:

By Mr. HAGGIN. Q—In your former examination
1626 you stated that some portions of this map, Map No. 6, were made from certain township plats furnished you by Mr. Houghton, and that other portions were made from other data; that some portions were made from your surveys. Will you designate to me, if you please, what portions of this Map, No. 6, were made from the township plats furnished you by Mr. Houghton?

A—I don't know that I can remember all the numbers of the thirteen townships.

Q—Are these the ones, sir? (Exhibiting thirteen plats.)

A—Yes, sir.

1627 Q—Will you just take those and call off the townships?

A—Township 31 south, Range 25 east; Township 30 south, Range 25 east; Township 28 south, Range 24 east; Township 30 south, Range 26 east; Township 31 south, Range 26 east; Township 29 south, Range 24 east; Township 27 south, Range 23 east; Township 28 south, Range 23 east; Township 29 south, Range 27 east; Township 29 south, Range 25 east; Township 30 south, Range 27 east; Township 31 south, Range 27 east; Township 29 south, range 26 east; all Mount Diablo Base and Meridian. That is all.

1628 Q—What did you make the balance of this Map No. 6 from?

A—The portion around Goose Lake I made from my surveys.

Q—Have you your notes?

A—Yes, sir. I ran the township line; these are subdivided by another surveyor.

Q—You mean Townships 27 and 28, Ranges 22 and 23.

A—I made that portion on that side; on the west side of the swamp; I made a portion of 27 and 28 south, Range 22 east, from my surveys on the west side of the swamp lands.

1629 Q—From surveys on the west side?

A—On the west side. This other side, on the east, I only ran the township lines, and it was subdivided by another surveyor.

Q—How did you make this portion of the swamp land itself, Township 27 and 28, range 22?

A—That had nothing to do with the interior, according to my survey; you will find that in Government plats; we just meander the exterior of it to the body of the tule land.

Q—You didn't make the interior of this body of swamp land from your survey?

1630 A—No, sir; you will see it is marked, because that is a printed plat and we were in a hurry with the work; we just took those printed sheets.

Q—You mean that the section lines in the body of the swamp land are simply marked on the printed plats?

A—Yes, sir; on these printed sheets; all I did was to take them and fill up to save me the trouble of numbering these sections.

Q—Outside of the swamp land you mean?

A—Yes, sir; the interior has nothing to do with it; the interior I didn't take from the Government plat; they are only shown here because they happen to be in

1631 these printed sheets; that is all.

Q—That is, in this whole body of swamp land that you have mentioned here, that is marked on this map here "Tule Land," on Buena Vista Slough, that refers to this whole body of swamp land?

A—Yes, sir.

1632 Cross-Examination of

CHARLES D. GIBBS.

By Mr. HOUGHTON. Q—I understand you to say that, as far as the sectionizing is concerned, or section lines within that plat of swamp and overflowed land, you had nothing to do with running them, nor were they platted from any survey of your own?

A—Not in the interior of the swamp; you know we only ran up to the swamp and meandered. That is the State line, and the Government has nothing to do with that.

1633 Q—I understand that the balance of the work which appears outside of the section lines, within that swamp and overflowed land, is taken from your survey—that is, what appears as the slough here on the margin of the swamp and overflowed land, in Townships 27 and 28 South, Range 22 East—that was done from your own survey?

A—Yes, sir; running that township line up. The section lines were run by Colonel Coffey.

Q—So far as that work was done, that was taken from your survey?

1634 A—Yes, sir.

Q—Also the lines which appear on the north part of Township 27 South, Range 22 East?

A—Yes, sir; there I did go into the swamp, as I told you, three-quarters of a mile.

Q—Yes, sir. I understand you to say so far as any sectionizing is concerned through here, that was not taken from the Government plat?

A—No, sir; nor was it taken from any survey made by me. If I had made the whole map, I should not have shown any surveys inside of the swamp land; being on a printed map, it happens to show them.

1635

Re-Direct Examination of

CHARLES D. GIBBS.

By Mr. HAGGIN. Q—This slough that is marked here across the township line, between Townships 27 and 28, Range 22, you merely surveyed the east bank of it, I understand you?

A—The east bank.

Q—You did not at that time make any surveys of the west bank?

1636 A—No; but I could see about the width of it, see the tules, just as you would look across a river, and see the brush and timber on the other side.

Q—You say now you only ran to the east bank on your survey?

A—I ran to the east bank. I didn't go across the slough.

Q—And the same up here on the township line between Ranges 27 and 28?

A—I ran three-quarters of a mile east; no farther. I made no other surveys on that line; I got to swimming water there, and stopped.

1637

T. R. FILLEBROWN,

Again recalled for defendant, testifies:

Q—Have you ever made any estimate of the maximum capacity of the Calloway Canal?

A—Yes, sir. I don't remember exactly what it amounts to; it does not amount to 74,000 inches; it amounts to considerably less than that; I cannot say how much less at this moment; 74,000 inches could not be carried in that canal, in any portion of it, as it is now
1638 constructed; I don't think so.

Re-Cross-Examination of

T. R. FILLEBROWN.

My recollection is it is considerably less than 74,000 inches; but I cannot make the exact figures; it is some time since I measured it. It would be simply a matter
1639 of guess-work for me to attempt to say how much less it is; I have not measured it recently; I don't know whether it is running its full capacity or not; I have not seen it for some time. I don't think it run its full capacity at any time in 1878—that is, its full theoretrical capacity of four feet deep. There were times when it was as full as it was deemed safe to carry it. I did not make any actual measurement at that time.

1640 F. P. McCRAY,

Being recalled for defendants, testified as follows:

By Mr. GARBER. Q—I understood you to say that, in making this map, you found some Government posts outside of the swamp land, and surveyed from them, and again connected with the Government posts?

A—What portion of the swamp land do you refer to?

Q—Some portion on this that you referred to, Map No. 3, either one of these two maps, Map 2 or Map 3?

A—Well, the lower map, No. 2, was subdivided by myself.

1641 Q—I understood you to say that in finding your starting point you found Government posts and charcoal outside of the swamp, and connected from that to make your survey?

A—There are two surveys in there—one that was subdivided by myself regularly, and the other was meandered; the sloughs were meandered. One was work done at one time; and one at another.

Q—Did you make separate surveys, commencing at each time from the Government corners, or did you make them both from the same?

1642 A—At the time of the subdivision I connected with the Government corners at all points where there were any connections to be made; then the exterior boundaries were established from the Government corners. The others I also connected with Government corners, part of them. I connected with Government corners in making both surveys; the government corners that I connected with were on both the east and west sides of the swamp.

Q—Now, what I want to ask you is, whether anyone taking those Government stakes, both on the east and on the west of the swamp, it is possible to connect them

1643 so as to make those section lines run through without any change or bending in the lines running across?

A—Not at all places; no, sir.

Q—Then, in that respect, this map is not and does not pretend to be correct, I suppose?

A—In that upper map the connection is made from Government corners, and the slough is meandered.

Q—No; what I want to ask you is, that in respect to the lines running clear across, and being straight all the way across, an exact square, these maps are not and do not pretend to be correct?

1644 A—So far as the lines running straight, they simply show the sections and the sloughs through them.

Q—I am not speaking of the sloughs at all; I make no reference to the sloughs; simply to these section lines; I understood you to say, conformably with the Government surveys, the corners, the posts outside of the swamp, it is impossible that they could go across with entirely straight lines?

A—I don't know how they are at all on that portion that you say; on that portion some of them run very nicely and very straight.

Q—None of them came through from the Government
1645 corners on the outside of the swamp, both east and west, without some bend or change of these lines?

A—That is from one point to another.

Q—Then, in that respect, this map is not correct, is it—does not pretend to be?

A—That does not show those bends, sir.

Q—As the sections are laid down here they go straight across, as if they connected with mathematical lines at right angles?

A—Yes, sir.

Q—That is not the fact, as I understand it.

A—Not in all cases. There is a map I made show-
1646 ing that particular portion, that represents it as I found it.

Q—None of these lines were connected across in a perfectly straight line?

A—When they get to the swamp line they may run straight across the swamp to the other point.

Q—But in connecting them with Government surveys, you could not take the Government surveys on the east and the Government surveys on the west, and have them connect, as represented on this map, with perfectly square lines, could you?

A—I don't think you could, at all points; there are
1647 some points in the southern portion you can. Take Government work, and it is represented in the same manner; it does not come entirely square, although they represent it that way.

Q—That is all I want to know; with the Government surveys running east and west, it would not connect exactly.

A—Government work does not connect exactly.

Q—I don't care about that. It would not connect as laid down on this map, exactly, would it?

1648 A—No, sir; I don't know that it would; I have shown a map.

Q—(Interrupting). I am not asking you about that. I only ask you if it is true that they would not connect as laid down?

A—Not in perfect squares; no, sir.

Cross-Examination of

F. P. McCray.

1649 By Mr. Houghton. Q—In running these lines across the swamp land, across the land which is represented upon map number two, how much of an error did you make, or how far did you have to run other than straight to make the connection from east to west?

A—Well, I don't know that I could answer that question as to how much it was. It has been some time ago.

Q—Was it a slight error—a slight difference, or a great difference?

A—Well, my memory is there was a great difference in it.

Q—Was there any great difference in running this
1650 line across there than you usually find in government surveys?

A—Well, I have found greater errors in government surveys than what is in there.

Q—I speak now of map number two?

A—Well, I don't know how I would answer that. In some localities it is usual to find a great many errors, and in others not.

Q—Well, there is a certain limit allowed government surveyors in making the surveys?

A—Yes, sir.

Q—Did you find in running across there any great
1651 excess of that limit which is allowed to a government surveyor; that is, on that first map?

A—There are various rules regulating government surveys. Sometimes errors are made by others, and then special rules apply to that; and the errors in the connections are greater than what they are for regular work. Then there are different rules for connecting townships, and rules also in subdivisions of townships; in making the subdivisions, there are errors allowed; certain limits.

Q—Does this Map B, made by yourself, correctly

1652 represent the variations or errors which you found in those lines?

A—It does, sir. I made the map.

Q—That was made from actual survey of that land? This sectionizing was made by yourself?

A—Made by myself.

Q—In which you connected the lines, connected with the government lines on the east and west?

A—Yes, sir.

Mr. Houghton—If the Court please, we offer the map now in evidence in explanation of his testimony and in connection with these lines.

1653 [The map referred to, and now offered in evidence, is the map heretofore marked "B," and used in evidence.]

(Here insert.)

Wm. B. Carr,

Being recalled for defendants, testified as follows:

By Mr. Garber. Q—Did you know Mr. Calloway?

A—I did. I saw Mr. Calloway when he was at work on what has been called the Calloway Canal, in July, 1875; I had a conversation with him at that time in re-

1654 gard to that work, while he was engaged in the work.

Q—What did he state about the work?

(Objected to by plaintiffs as irrelevant, immaterial and inadmissible.)

(The objection is overruled, and plaintiffs except.)

A—He said that he was building a canal for the company—for the Calloway Company, or the Kern River Land and Canal Company. That is the company defendant in this case; it has always been known here and spoken of as the Calloway Canal Company.

Q—What, if anything, was done at the time that

1655 Haggin and Carr purchased the interest of Calloway, in regard to turning over everything?

A—Mr. Calloway turned over the stock of the company; it consisted of shares of stock in the defendant corporation; he didn't turn over all of the stock; he turned over a majority of the stock. After the property was turned over the work was done by the canal company, this defendant corporation. Mr. Haggin advanced the money for the work, for the company; the company has refunded the most of it; I think that they are still some in his debt. It was done for the company. After that I was out there a good many times,

1656 from July, 1875, to the first of January, 1876. We were negotiating for that canal for about two or three months, and I examined the line of the canal, as there had been some land located, and it was a question where the canal ran. I went out over the line with Mr. Calloway examining it, and the stakes were there, and he pointed out where it was, and he had a map designating some of the lines. It was staked out, just where the canal was built afterwards; the stakes commenced at his work and ran on out over the plains.

Q—Do you recollect having any conversation with Mr. Wible in 1878, in connection with the water going
1657 down towards his camp, or being turned off by you or any one else?

A—Yes, sir.

Q—State what that conversation was.

Mr. HOUGHTON—We object to it; first, on the ground that it is irrelevant and immaterial; second, on the ground that they have not called Mr. Wible's attention to the time, place and circumstance.

(The objection is overruled, and plaintiffs except.)

A—I had two or three conversations with him; I had a conversation here in town and a conversation with him at the Belle View Ranch, and I would not be posi-
1658 tive, but I think I had a conversation out on the ground along in February, I think, of 1878.

By Mr. GARBER. Q—State what the conversation in Bakersfield was first?

A—Mr. Wible asked me if I had not had some talk with Mr. Livermore at San Francisco; I told him that Mr. Livermore had called on Mr. Haggin and that he wanted us to turn the water in all of our canals, and especially to see what could be done by turning the water into Goose Lake; and that Mr. Livermore had offered us five hundred dollars to put on some teams and open up the canal and turn in water into Goose
1659 Lake; and I told him I didn't think it could be done for that money, the amount of water that he wanted to turn through. Mr. Wible then discussed the proposition of turning the water through just above Goose Lake, and I claimed, I believe, that it would cost about a thousand dollars, and Mr. Wible thought it could be done for five hundred. My recollection was that he said he had or would put on some men himself; that something must be done or their canal would be torn to pieces there; that is as near as I can recollect.

Q—That is the canal down at his headquarters?

1660 A—That is the canal at his headquarters; and he asked me if I was willing to turn what water I could into the Calloway and through the ditches; and I told him I would, and I gave that order. That was in February, 1878; I think it was about February.

Q—Do you recollect hearing Mr. Wible testify something about that you said that he should not have a snoutful of water, or something to that effect?

A—Yes, sir.

Q—Do you recollect anything about whether you said that or not?

A—I never said such a thing in my life. Sometimes
1661 I would be in Kern County once a month, since 1874.

Q—Do you recollect anything about the volume and condition and amount of the water in Kern River in 1876?

A—Yes, sir.

Q—At what times and places did you observe it in 1876?

A—Along about the latter part of July or August, I crossed the river at Chester Ferry, which is just above Old River; just across Kern River above Old River; that was in July, 1876, or the 1st of August.

Q—What was the extent of the water there then?

1662 A—It was a very large river; so large that we could not cross, could not ford it; we came across it in a ferry; I crossed that ferry probably twenty times that year; I think that ferry was continued in use from the spring until the time I speak of, August, 1876. I was at different times down, from the spring of 1876, until the last of July, 1876, and the ferry was in use all of the time. I don't know how long after that the water continued high in the river, but my recollection is that the water remained high longer that year than, I think, any year since I have known that river; the river was very
1663 high in 1878; the banks full. Along in February and March, 1878, it was as high as in 1876; I could not state the amount of water that was actually turned into the Calloway Canal in 1878, after I had that conversation with Mr. Wible; but I think it was shortly after I gave the order. The Calloway broke from having too much water in it; it was full.

Q—What was done with that water?

A—The lands were irrigated from the waters of the Calloway that year.

Q—Was all of it used?

A—Yes, sir; that is, there was a complaint that they

1664 did not have enough; all that was running in the canal was in use whenever I saw it; that is, whenever I was out there. I think there was some water ran out in that year to make sheep feed; that is, to irrigate the ground so that more feed would grow. Whenever the Calloway was full in 1878 it was used to irrigate the land for crops.

Q—Do you know what is the cost per mile of building such a ditch as the Calloway, for the main canal?

[Plaintiffs object to the question on the ground that it is irrelevant and immaterial.]

[The objection is overruled, and plaintiffs except.]

1665 A—Three thousand dollars a mile, I should say, for the main ditch.

Q—How much for the side ditches?

A—From five hundred to eight hundred; some of them probably one thousand.

Q—Is there any part of that work that you can specify more expensive than other portions of it, of the main canal of the Calloway?

A—The first mile of it would be a good deal more expensive, owing to the great depth. I suppose it would cost per mile in the deep cut more than double. The other estimate I gave was the average of the whole.

1666

Cross-Examination of

WM. B. CARR.

By Mr. HOUGHTON. Q—How much was irrigated from the Calloway in 1878? How many acres of land?

A—Something over a thousand acres.

Q—Two thousand acres?

A—No, sir; I don't think there were two thousand—that is, in grain.

1667 Q—How much over a thousand in everything?

A—In crops one thousand.

Q—How much was irrigated from Goose Lake Canal in 1878, when the water was turned in as you say?

A—I don't know; I never was down there in 1878; I think there was some little used there by one or two parties; but I am not certain about that; that is, from Goose Lake Canal.

1668 Re-Direct Examination of

WM. B. CARR.

By Mr. GARBER. Q—Did you say there were only a thousand acres irrigated by the Calloway in 1878?
A—About a thousand acres; may be twelve hundred.
Q—Do you know about that?
A—Yes, sir; I think I do; that is, for grain.
Q—You confine that to grain?
A—Yes, sir.

1669 Re-Cross-Examination of

WM. B. CARR.

By Mr. HOUGHTON. Q—What other crops were there irrigated there besides grain?
A—There was water at times run out to make feed for stock.
Q—On the plains?
A—Yes, sir.
Q—There was no other crops cultivated there except grain?
1670 A—There might have been some alfalfa; I am not certain about that.
Q—You don't know anything about that?
A—No, sir.
(To Mr. GARBER)—I am speaking of the spring of 1878.
Mr. HAGGIN—We offer in evidence the map marked "Defendants' Exhibit H."

[Here insert.]

Also, the map marked "Defendants' Exhibit K."
1671 [Here insert.]

Also the map marked "Defendants' Exhibit I."

[Here insert.]

Also the map marked "Defendants' Exhibit D."

Mr. MCALLISTER—We object to that map except so far as it refers to the survey of Mr. McCray as testified to by Mr. McCray. There is a good deal of dispute about this map and we think it should be confined to so

1672 much as is expressed upon it. He said the balance of it was not made from any survey at all.

Mr. GARBER—We are willing to have it go in evidence subject to that objection.

[Here insert "Map D."]

Defendants also offer in evidence map marked "Defendants' Exhibit J."

[Here insert.]

Also profiles marked respectively "Defendants' Ex-
1673 hibits L, M, N, and P."

[Here insert all of said profiles.]

Also the statistics of Mr. Sampson marked "Defendants' Exhibit O."

[Here insert.]

Also the Visalia statistics marked "Defendants' Exhibit R."

[Here insert.]

1674 Mr. MCALLISTER—The only objection we make to Exhibit R is the same objection we made originally to the originals when produced in Court, which is, that some of them were taken by Mr. Hayne and some by Mr. Cochran, and that therefore they are not admissible except so far as they were taken by Mr. Cochran. Then we further object that they were not admissible at all, because they represented a different locality or atmosphere. We do not want to be considered as waiving the objections.

The COURT—I understand that the objections go against the copies as well as against the originals.

1675 The defendants then offered in evidence a map marked Exhibit "Q."

[Here insert.]

Also another map marked Exhibit "A."

[Here insert.]

Also another map marked Exhibit "C."

[Here insert.]

Defendant rests.

1676 Mr. McAllister—We move to strike out the testimony of Col. Mendell founded upon the calculations and observations made at Visalia, on the ground that those observations are only partially made by Mr. Cochran, and that some of them were made by other parties. In so far as those observations were made by parties other than Mr. Cochran, they have never been proven.

The motion is denied and plaintiffs except.

Mr. McAllister—We then move to strike out the calculations of Mr. Schuyler, also based upon those Visalia observations, upon the same ground.

The motion is denied and plaintiffs except.

1677 Mr. McAllister—Then there were certain observations, or rather certain calculations, submitted by Col. Mendell as to the amount of evaporation, which were based upon his general knowledge of the subject of evaporation and of this locality. We move to strike out his calculations inasmuch as he himself has admitted that he could not make statements to a moral certainty in reference to them, and therefore we submit that his evidence is incompetent.

The objection is denied and plaintiffs except.

The plaintiffs further moved to strike out the data upon which Col. Mendell and J. D. Schuyler's calcula-
1678 tions were made, on the ground that defendants had failed to prove the correctness of such data.

The motion is denied and plaintiffs except.

1679 ***Certificate of Counsel and Judge of Superior Court.***

The foregoing, (consisting of 420 pages) is a portion of the Bill of Exceptions on motion for a new trial and on appeal, being Volume No. 3 of said Bill, which said Bill of Exceptions consists of four volumes, and we hereby agree and certify that the foregoing portion of said Bill of Exceptions is true and correct.

July 28th 1882.

1680 Stetson & Houghton

Att'ys for Pl'ffs.

Louis T. Haggin

Att'y for Def't.

1681 The foregoing is one (No. 3) of four volumes comprising the Bill of Exceptions on motion for a new trial and on appeal, which said Bill is hereby allowed and approved as true and correct.

July 31st, 1882.

R. Brundage,

Superior Judge.

Endorsed:

Filed July 31st, 1882

Service of this volume (4) accepted by copy this 21st day of August A.D. 1882.

Louis T. Haggin

Attorney for Respondent